

# Indicators of **child well-being** in Botswana

between 2001 and 2008



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## Acknowledgements

This report was edited by Constance Formson UNICEF Botswana Social Policy Specialist (a.i.), under the leadership of Marcus Betts, Deputy Representative based on the secondary analysis Child and maternal welfare in Botswana between 2001 and 2008 produced in 2011 by Stellenbosch University's Social Policy Research Group within the Faculty of Economics and Business Sciences. The Stellenbosch team was led by S. van der Berg and included R. Burger, A. Grover, C. Burger and P. Shrestha.

The nutrition section of this report is an edited extract from UNICEF Botswana (Forthcoming), Child Nutrition Situation in Botswana: Observations from the 2000 and 2007 Household Surveys. This analysis was conducted by the University of Botswana team of M. S. Nhyepi, L. Mokgathe, K. S. M. Gobotswang and S. D. Maruapula.

Special thanks are due to Paul Derrick for his work in laying out the report.

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and <http://photos.unicef.org>

Design: Paul Derrick Design

## Acronyms

ACSD	Accelerated Child Survival and Development
AIDS	Acquired Immune Deficiency Syndrome
ART	Anti-Retroviral Treatment
ARV	Anti-Retroviral
BAIS	Botswana AIDS Impact Survey
BDS	Botswana Demographic Survey
BFHS	Botswana Family Health Survey
BLFS	Botswana Labour Force Survey
GoB	Government of Botswana
HIV	Human Immunodeficiency Virus
IMR	Infant Mortality Rate
MTCT	Mother to Child Transmission
NACA	National AIDS Coordinating Agency
NDP	National Development Plan
NPA	National Plan of Action
OVC	Orphans and Vulnerable Children
PMTCT	Prevention of Mother to Child Transmission
SADC	Southern African Development Community
UB	University of Botswana
U5MR	Under-5 Mortality Rate
UN	United Nations
UNAIDS	The Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
WHO	World Health Organisation



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## Foreword

**This report represents one of the few collaborative efforts to undertake secondary analysis on various recent national survey data. The main objective for undertaking this analysis was to make use of the wealth of data we have nationally to provide better insights into the well-being of children and women in Botswana.**

The report provides a re-analysis of various survey data disaggregated by geographical location, gender, education, orphan status and wealth grouping. An analysis of this kind provides a strong basis for evidence-based policy and programming; facilitating policies and programmes that have a more pronounced impact on the well-being of children and women.

While secondary analysis of existing data provides invaluable insights into any area of interest, as in the case of this particular analysis, we acknowledge that often surveys from which the analysis is based have very specific objectives, and may not always meet the exact needs of all research interests. However, we still encourage further collaborations of this kind that unearth a wealth of information for informed decision making and stimulate further research in the future.

We hope you find this publication useful in your policy and programming work towards the betterment of the lives of all Botswana children.

**Pula !**



Dr. Doreen Mulenga MB ChB, MPH

UNICEF Representative, Botswana.  
June 2012



Mrs. Anna Majelantle BA, MPH

Acting Statistician General, Statistics Botswana.  
June 2012

## Introduction

**The report examines a range of household surveys to better understand the needs of women and children in Botswana. The government has a rigorous and inclusive planning process, but often there is not much detailed data analysis to draw on. Existing studies examining the country's household data sets have concentrated on reporting broad aggregated patterns and trends.**

This report aims to contribute to better targeting and responsiveness in policy making by providing a richer and more detailed profile of the circumstances of poor and destitute households. The study provides valuable information to assess whether public services and interventions are reaching those who need it most. The tabulations also show how various dimensions of household vulnerability and need intersect and overlap, which is vital information for poverty alleviation strategies. In this way the analysis aims to support responsive and evidence-based policy making.

This report outlines the most important findings from a study involving a detailed and extensive analysis including more than two thousand tabulations. The project analysed five data sets that describe socio-economic and welfare outcomes for households in Botswana from 2001 to 2008.<sup>1</sup>

The five data sets are the:

- ▶ Botswana AIDS Impact Surveys of 2001, 2004 and 2008 (BAIS I, II and III)
- ▶ Botswana Demographic Survey in 2006 (BDS)
- ▶ Botswana Family Health Survey of 2007 (BFHS IV)

The analysis focuses on compositional patterns rather than changes over time, although there is some trend analysis based on comparisons of the three Botswana AIDS Impact Surveys.

The report is structured into five sections. The first section presents findings related to child survival. The second section considers safeguarding and protection of children while the third section highlights disparities regarding water and sanitation. The fourth section addresses the incidence of HIV and AIDS and changes in knowledge of the disease and attitudes towards the affected over time. The fifth section is devoted to issues of social protection for children.

1. Seven data sets were identified that fit the objectives of the study. However, due to problems relating to three of the surveys (detailed in the technical appendix), only five of these data sets could be analysed.



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## Child survival



## Under-five mortality

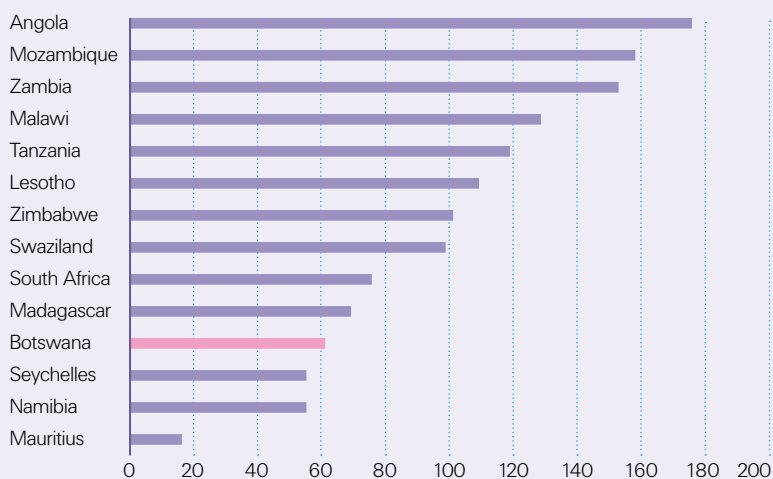
Despite high levels of immunisation and other maternal and child health interventions coverage, the under-five mortality rate has increased from 53 per 1000 live births in 1988 to 57 per 1000 live births in 2007 (Statistics Botswana, 2010). In 2007, diarrhoea, pneumonia, septicaemia, dehydration and HIV/AIDS related illnesses were the top five causes of death for children under five in Botswana (ibid). Together these preventable diseases accounted for more than half of all deaths of children under five.

However, in terms of under-five mortality, Botswana is performing much better than other countries in the region. The average under-five mortality in the Eastern and Southern Africa region was 108 per 1000 live births in 2009 (UNICEF, 2010).<sup>2</sup>

Reanalysis of the Botswana Demographic Survey (BDS) 2006 suggests that children living in rural areas or children with less educated mothers may face a higher risk of dying before their 5th birthday. Under-five mortality rates are the lowest in urban towns and cities (47 per 1000 live births), followed by urban villages (53), then rural areas (74).

In Botswana, as elsewhere, under-five mortality is slightly higher among boys than girls. Disparities in under-five mortality by household wealth deciles<sup>3</sup> exist, with under-five mortality being significantly higher in poorer households.

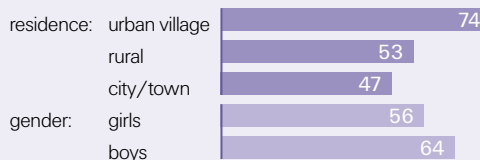
Under-five mortality (per 1000 live births) for SADC countries, 2006



SOURCE: BDS 2006, WORLD BANK INDICATORS 2011

### Under-five mortality is higher in rural areas and among boys

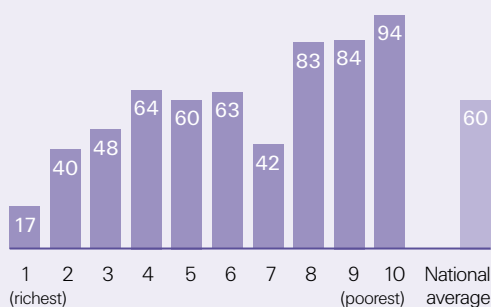
Under-five mortality (per 1000 live births) by geographical location, 2006



SOURCE: BDS 2006

### Under-five mortality is higher in poorer households

Under-five mortality (per 1000 live births) by wealth deciles, 2006



SOURCE: BDS 2006

2. Further decompositions of health outcomes can identify patterns with socio-economic variables. However, because a death is under normal circumstances a relatively rare event, there are sample size issues regarding estimation of mortality rates based on a survey. Consequently any further decomposition of these indicators become problematic and such evidence should be seen as exploratory and tentative.

3. Wealth deciles present the ratio of the average wealth of the richest 10 percent of the population to the average wealth of the poorest 10 percent.

Note: Further decompositions of health outcomes can identify patterns with socio-economic variables. However, because a death is under normal circumstances a relatively rare event, there are sample size issues regarding estimation of mortality rates based on a survey. Consequently any further decomposition of these indicators become problematic and such evidence should be seen as exploratory and tentative.



## Immunization

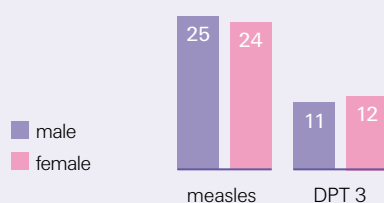
With the introduction of the Expanded Programme on Immunization (EPI) in 1980, the Government of Botswana committed to eradicating vaccine preventable diseases.

The immunization rate in Botswana is impressive with 98% of children under the age of 5 vaccinated against BCG (Bacillus Calmette-Guérin) and 95% against Diphtheria, Pertussis and Tetanus (DPT1). Remarkably, there is minimal disparity in immunization levels between different wealth deciles, as well as between rural and urban areas. Botswana's achievements contrasted against that of other SADC countries indicates that the country is among the countries with high immunization rates (WHO, 2008). This can be interpreted as evidence that the public health service delivers these basic functions in an equitable and effective way.

Although immunization rates against measles (76% nationally) and combined diphtheria, pertussis and tetanus (DPT3) (89% nationally) are also high, greater proportions of children are not immunized with these two vaccines. There is minimum disparity in terms of wealth deciles, geographical location and gender.

### No disparities exist in immunization rates by gender

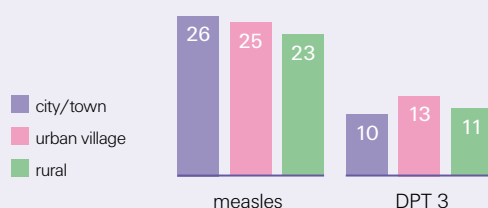
Percentage of children under-5 not vaccinated against measles and combined DPT3 by gender



SOURCE: BFHS IV 2007

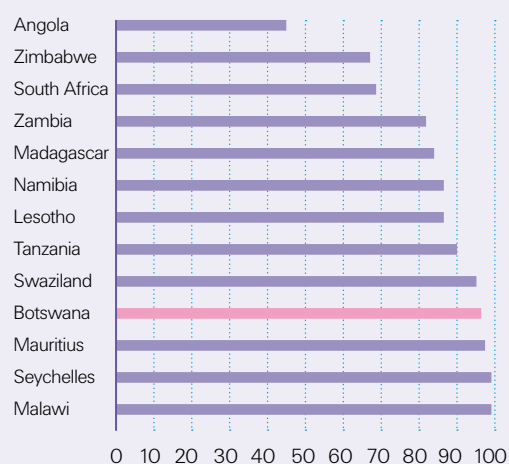
### No disparities exist in immunization rates by geographical location

Percentage of children under-5 not vaccinated against measles and combined DPT3 by geographical location



SOURCE: BFHS IV 2007

### Proportion of children who received tetanus vaccinations before the age of 12 months for SADC countries, 2006



SOURCES: CONSTRUCTED USING WORLD BANK INDICATORS AND BFHS IV DATA FOR BOTSWANA

### No disparities exist in immunization rates among households of different wealth deciles

Vaccination coverage by wealth deciles, 2007



SOURCE: BFHS IV 2007

## Child nutrition<sup>4</sup>

Child nutrition is one of the most important indicators on child well-being, and has lifelong effects on a child, influencing future opportunities.<sup>5</sup> Despite investment in interventions aimed at improving child nutrition in Botswana, child malnutrition remains persistent. Challenges in reducing child malnutrition are likely due to a number of factors including:

- ▶ lack of clear appreciation of key determinants of child malnutrition or failure to consider the determinants in interventions;
- ▶ failure to identify children at greater risk of malnutrition compared to others and;
- ▶ failure to target high impact low cost interventions to the few most affected children under-five.

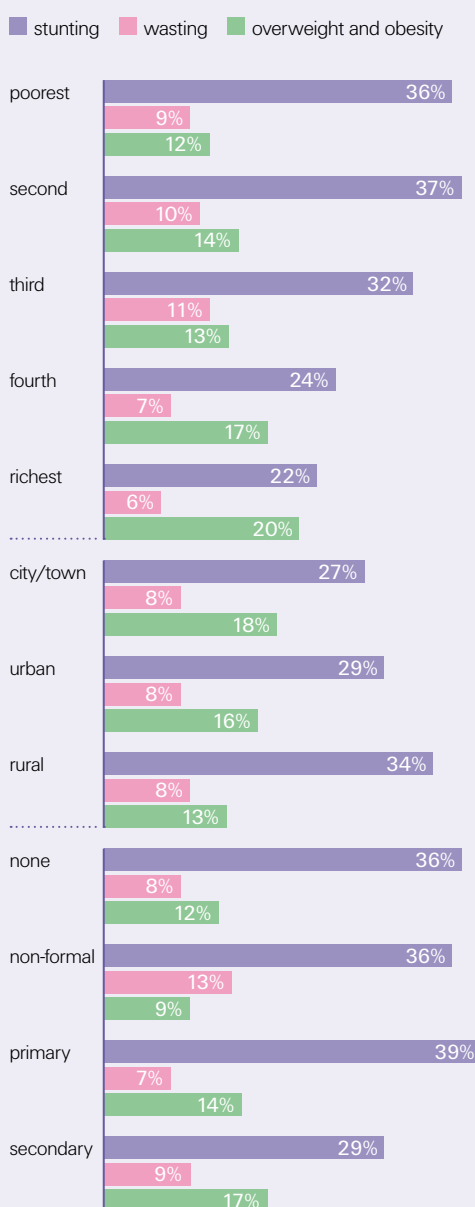
The result of a secondary analysis conducted in 2011 on various survey data indicates disparities in underweight, stunting and obesity by wealth grouping, geographical location and educational level. Similarly, the prevalence of severe and moderate stunting in 2007 was higher among the lowest wealth quintile at 19% and 17% respectively compared to 11% and 12% for those in the highest quintile.<sup>6</sup> Similar disparities exist with respect to the prevalence of underweight. In the same year the prevalence of underweight in the poorest households was 16% compared to 4% for those in the richest households.<sup>7</sup> However no significant association was found between wealth rank and wasting. Stunting and underweight also differed by place of residence (rural, urban, city/town) and geographic location, with higher prevalence in rural areas compared to cities/towns.

The current status of malnutrition indicates the need for enhanced support to children in poorer households, and in particular female headed households as they tend to be poorer than male headed households, and districts that consistently register the poorest nutritional indicators.

Compared to other SADC countries, malnutrition in Botswana is comparatively lower. However current child malnutrition status remains high for an upper middle income country. Countries of similar income status such as Jamaica, Iran and Lebanon have considerably lower malnutrition rates.<sup>8</sup>

**Child malnutrition is highest in poorer households, rural areas and in households where caregivers have low levels of education**

**Prevalence of child malnutrition for children under-five by wealth quintile, geographical location and level of caregiver education, 2007**



SOURCE: UNICEF BOTSWANA (FORTHCOMING), CHILD NUTRITION SITUATION IN BOTSWANA: OBSERVATIONS FROM THE 2000 AND 2007 HOUSEHOLD SURVEYS.

Note: the graph depicts total prevalence, i.e. the sum of moderate and severe levels of malnutrition.

4. Note: The analysis for this section is obtained from UNICEF Botswana (Forthcoming), Child Nutrition Situation in Botswana: Observations from the 2000 and 2007 Household Surveys. The analysis was conducted by the UB team of M. S. Nnyepi, L. Mokgathe, K. S. M. Gobotswang and S. D. Maruapula. The surveys analysed were the Multiple Indicator Cluster Survey (MICS) data of 2000 and the Botswana Family Health Survey (BFHS) data of 2007.

5. de Onis M, Frongillo EA, Blössner M. Is malnutrition declining? An analysis of changes in levels of child malnutrition since 1980. Bulletin of the World Health Organization, 2000;78(10):1222–33.

6 and 7. UNICEF Botswana (forthcoming), Child nutrition situation in Botswana: Observations from the 2000 & 2007 Household surveys.

8. UNICEF (2010), State of the World Children's 2010: Celebrating 20 Years of the Convention on the Rights of the Child. UNICEF, NY

## Maternal mortality

In 2007, 96% of women reported that they received at least some antenatal care prior to giving birth and 95% of births were supervised by skilled staff. Such coverage rates compare well to that of Botswana's neighbours (WHO, 2008). Significantly, for both these indicators the levels remain relatively high even for pregnant women who are poor, young, have little education or are from rural areas.

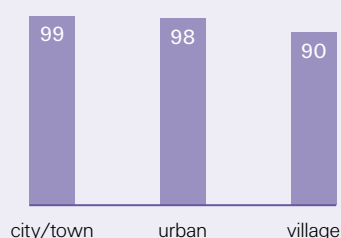
Despite the coverage of antenatal care, maternal mortality remains a concern, suggesting that there may be scope to improve the quality of the medical services provided. Between 2005 and 2008 the maternal mortality ratio increased from 158 per 100,000 to a high of 195.7. It has since declined to 163 per 100,000 in 2010.

While Botswana's maternal mortality rate may compare well with that of its neighbours, the level is high for an upper middle income country. Countries of similar income status had considerably lower maternal mortality rates in 2008 (34 per 100,000 in Jamaica, 28 in Iran, 24 Lebanon) (Hogan et. al., 2010). Among high income countries maternal mortality rates in 2008 had been decreased to single digits (8 per 100,000 in Australia, 5 in Denmark, 7 in Israel) (World Bank, 2011).

There is also concern about the vulnerability of teenage mothers. The BFHS IV indicates that 2% of girls aged 12 to 18 are mothers. The survey also shows that there are discernable patterns with other indicators of vulnerability, with the prevalence of teenage pregnancy increasing with rural location (3% vs. 0.3% for those living in the city), poverty (0.6% and below for the wealthier half of population) and double orphan status (6% vs 2% for non-orphans).

**Women in rural areas are less likely to receive skilled attendance than women in cities/towns and urban villages**

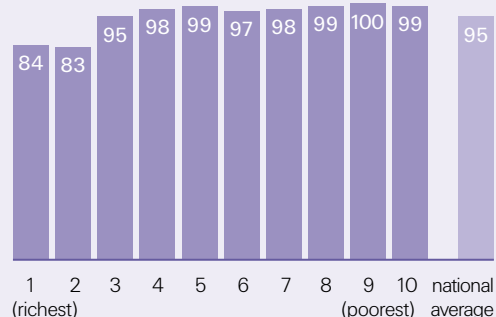
Percentage of births attended by skilled health personnel by geographical location, 2007



SOURCE: BFHS IV 2007

**The likelihood of receiving skilled attendance is high across wealth deciles**

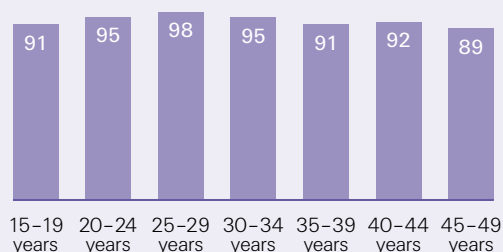
Percentage of births attended by skilled health personnel by wealth decile against the national average, 2007



SOURCE: BFHS IV 2007

**The likelihood of receiving skilled attendance is high for all age groups**

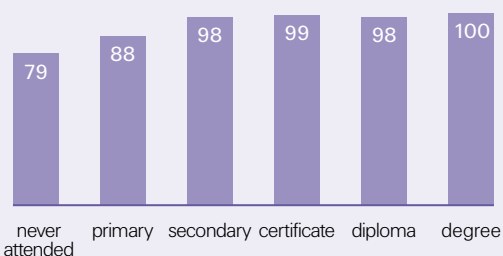
Percentage of births attended by skilled health personnel by age of mother, 2007



SOURCE: BFHS IV 2007

**Women with no education are the least likely to receive skilled attendance**

Percentage of births attended by skilled health personnel by education, 2007



SOURCE: BFHS IV 2007

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## Child protection



## Birth registration

Birth registration is a human right and a critical aspect of child protection (UNICEF, 2010). Children from low-income households are more at risk of not having their birth registered; an omission that perpetuates the poverty into which they are born, and potentially continues the intergenerational cycle with their future children.

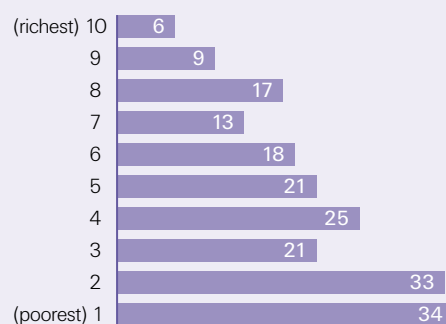
Significant difference exists in the prevalence of birth registration across regions and among countries within the same region. In particular, birth registration is lowest in developing countries and in Sub-Saharan Africa in particular with only 36% of children under-five who were registered in 2010 (UNICEF, 2010).

In Botswana although birth registration has been on the increase, at a national level 28% of children were not registered in 2007.<sup>9</sup> The BFHS indicates that:

- ▶ children from poorer households are more likely not to be registered
- ▶ children in rural areas have a higher likelihood of not being registered
- ▶ double orphans have the highest likelihood of not being registered
- ▶ children of less educated parents are more likely to be unregistered

Children from poorer households are more likely not to be registered

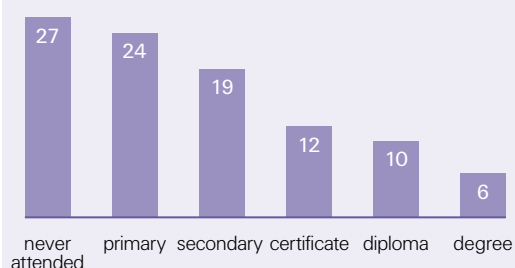
Percentage of children who are not registered by wealth decile, 2007



SOURCE: BFHS IV 2007

Children in households where the head of household has a low level of education are more likely to be unregistered

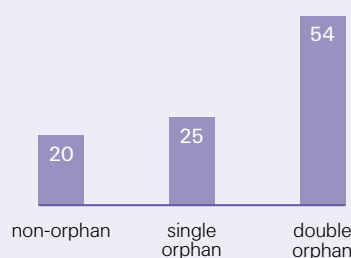
Percentage of children who are not registered by education of household head, 2007



SOURCE: BFHS IV 2007

Double orphans have the highest likelihood of not being registered

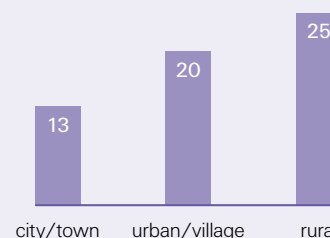
Percentage of children who are not registered by orphan status, 2007



SOURCE: BFHS IV 2007

Children in rural areas have a higher likelihood of not being registered

Percentage of children who are not registered by geographical location, 2007



SOURCE: BFHS IV 2007

## Child labour

Child labour<sup>10</sup> is an important and poorly documented issue in Botswana (Procek, 2006). Botswana ratified the ILO Minimum Age Convention in 1997 and the ILO's Worst Forms of Child Labour Convention in 2000. Nevertheless, many newspapers and magazines continue to report that child labour is prevalent in Botswana.

Due to the strong social judgements around the abuse and exploitation of children it is difficult to accurately capture child labour via surveys reliant on self-reporting. The Labour Force Survey of 2005/06 indicated that around 38,000 children (9% of children aged 7 to 17) were engaged in economic activities. The BFHS 2007 estimated that 4% of children between 12 and 17 were performing work lasting at least one hour in the last 7 days. Using the same definition, the estimates from BAIS 2008 and the BDS 2006 suggest that between 1% and 2% of children work. The difference in the prevalence of reported levels of child labour may be largely attributable to the divergent approaches of the two surveys.

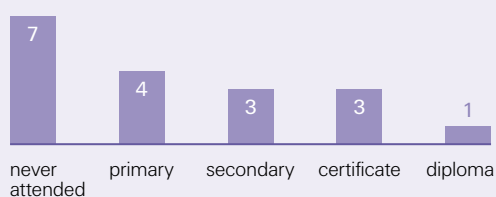
The surveys indicate that child labour may often involve physical types of work. Child labour is more likely in rural areas and amongst older boys. Children who have left school are more likely to engage in child labour, but one cannot discern whether the allure of the labour market is prompting children to leave school or if it is a case of school leavers working because they have little else to do.

The BFHS IV reveals that the children most likely to be working are:

- ▶ from poorer households
- ▶ older (15 years and above)
- ▶ boys
- ▶ in rural areas
- ▶ those who have never attended school or have left school
- ▶ whose parents have low levels of education

### Children in households where the head of household has a low level of education are more likely to be working

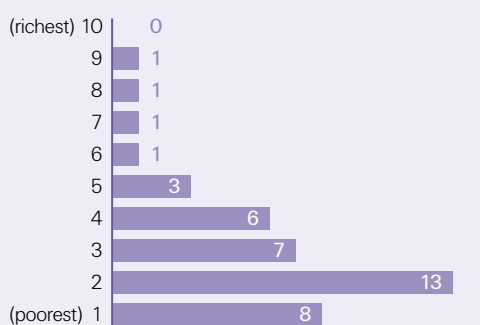
Percentage of children working by education of household head, 2007



SOURCE: BFHS IV 2007

### Children from poorer households are more likely to be working

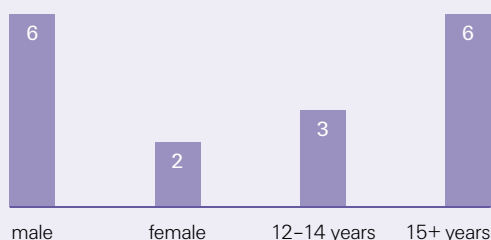
Percentage of children working by wealth decile, 2007



SOURCE: BFHS IV 2007

### Older children and boys are more likely to be working than younger children and girls

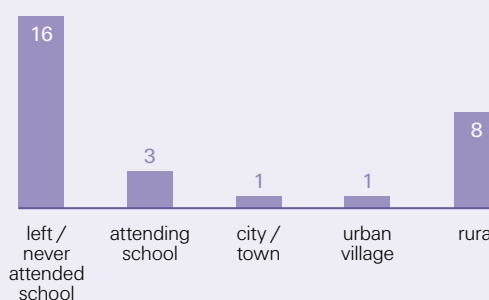
Percentage of children working by age and gender, 2007



SOURCE: BFHS IV 2007

### Children in rural areas and those who have never attended school or have left school are more likely to be working

Percentage of children working by education and geographical location, 2007



SOURCE: BFHS IV 2007

10. United Nations Convention on the Rights of the Child (UN-CRC) emphasizes the importance of protecting children from: 'work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development' (1989, Article 32). In line with this the ILO defines child labour to be any form of labour that is hazardous, that is 'Work that is damaging to his or her mental, physical and emotional development' (Source: <http://www.ilo.org/ipec/facts/lang-en/index.htm>)



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## Water and sanitation



## Water

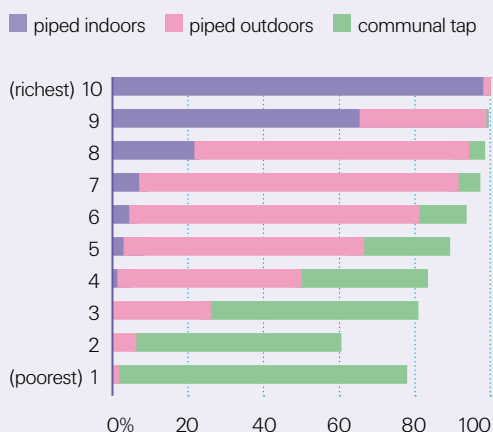
There are notable differences in access to water and sanitation by wealth decile and according to location. According to the BFHS IV, in 2007, 48% of households in cities and towns had access to piped water indoors, while only 19% and 7% of households in urban villages and rural areas had access to piped water indoors.

There are also strong associations with wealth deciles: none of the households in the bottom wealth decile have access to piped water indoors, while access is close to universal (99%) for those in the top wealth decile.

Alternative water sources include piped outdoors water, communal tap, borehole and obtaining water from a stream or river. 77% of households in the bottom wealth decile accessed water via a communal tap, 10% via a borehole, 3% from a water stream or river and 1% from piped water outdoors.

Poorer households have no access to in-door piped water but rather depend on outdoor piped water or communal sources of water

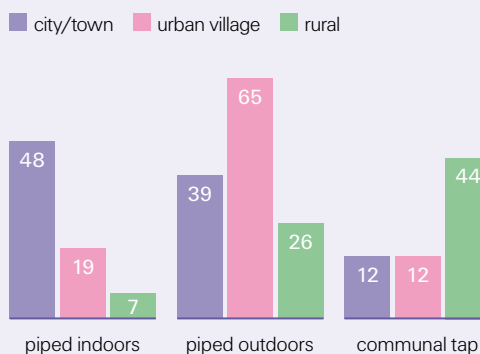
Percentage of households with access to different water sources by wealth decile, 2007



SOURCE: BFHS IV 2007

Households in rural areas are less likely to have access to piped in-door water, and more likely to depend on communal sources of water

Percentage of households with access to different water sources by geographical location, 2007



SOURCE: BFHS IV 2007

## Sanitation

Altogether 23% of households reported that they had their own flush toilet. The distribution was strongly correlated with wealth deciles, with no households in the bottom wealth decile having a flush toilet while virtually all households in the top wealth decile (99%) had access.

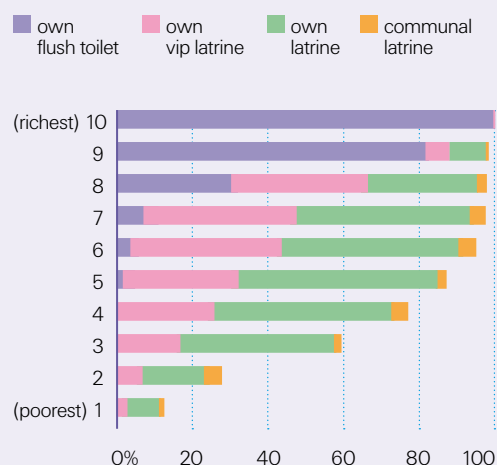
In cities and towns 56% of households had access to a flush toilet, but the prevalence was much lower in urban villages (21%) and rural areas (8%).

Households that did not have access to a flush toilet usually had their own pit latrine (50%), but there were also some that did not have access to their own toilet (7%) or who had no access to a toilet (20%).

Overall 79% of households in the bottom wealth decile did not have access to a toilet, while only 0.1% of those in the top decile did not have any access to a toilet.

### Poorer households do not have flush toilets in their houses and primarily use pit latrines

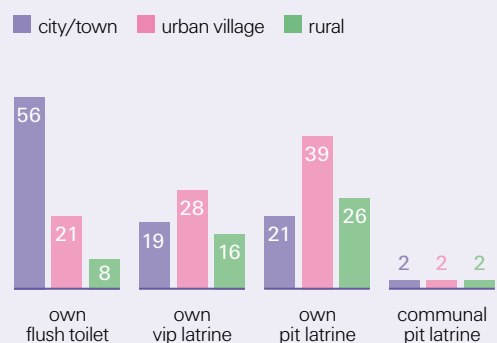
Percentage of households with access to different sources of sanitation by wealth decile, 2007



SOURCE: BFHS IV 2007

### Households in rural areas primarily use pit latrines and are less likely to have flush toilets

Percentage of households with access to different sources of sanitation by geographical location, 2007



SOURCE: BFHS IV 2007

## HIV and AIDS

UNAIDS estimates that, 25% of adults in Botswana were HIV positive in 2009 and, 93,000 children had lost either one parent or both parents due to AIDS. However, Botswana is widely recognised as having made remarkable progress in fighting the spread of the disease.

There has been a dramatic expansion in ARV coverage and by the end of 2009 it was estimated that 90% of people living with HIV who needed treatment were receiving it (NACA, 2010). Botswana has consequently achieved universal treatment access as defined by the UN.<sup>11</sup>



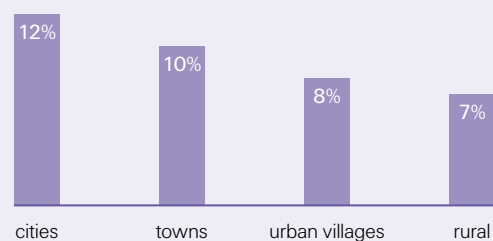
11. A threshold of 80% is used as a benchmark for universal access. According to UNAIDS, universal access provides the platform on which people in need can access various HIV services. However, this does not imply that there will be, or should be, 100% utilisation. The basic principles that define universal access include that services must be equitable, accessible, affordable, comprehensive and sustainable over the long-term.

### Correct knowledge about HIV transmission

There is limited comprehensive knowledge regarding how to prevent HIV transmission regardless of gender, education level, geographic location, wealth decile, age and orphan status. The implication of this is that people are not gaining comprehensive, correct information about HIV in order to protect themselves.

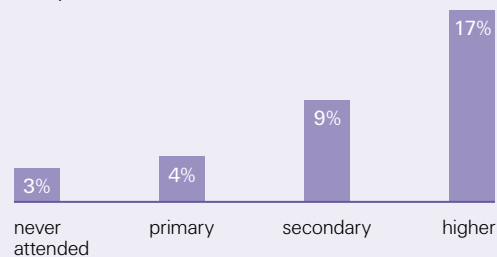
According to the BAIS III, at a national level only 8% of those sampled knew all three correct ways<sup>12</sup> of preventing HIV transmission. If Botswana is to achieve its goal of an AIDS free generation, it is imperative that efforts be undertaken to improve correct knowledge of HIV transmission amidst current national interventions to address HIV.

Knowledge of all 3 ways of preventing HIV transmission by geographical location, 2008



SOURCE: BAIS III, 2008

Knowledge of all 3 ways of preventing HIV transmission by educational level of household head, 2008



SOURCE: BAIS III, 2008

12. i) Use of condom; ii) Both sexual partners should have no other partners and iii) No sex at all.

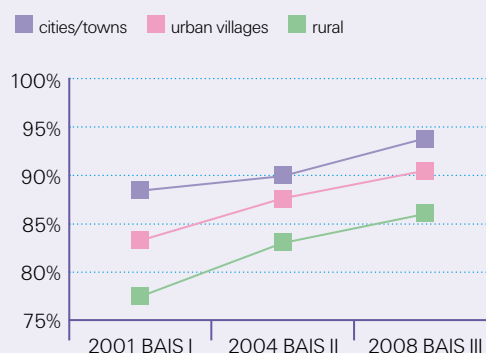
## Improving knowledge and reducing stigma

Much effort has been invested in promoting open dialogue about HIV and AIDS to de-stigmatize the disease. Through these efforts, there was a dramatic rise in the knowledge of mother to child transmission (MTCT) between 2001 and 2008 – and perhaps equally impressive, a narrowing of the differences in knowledge of this topic across geographical types.

There has also been significant progress in reduction of discrimination<sup>13</sup> and ignorance. However, the levels of stigma and discrimination remain concerning — particularly in rural areas.

### Knowledge of MTCT has increased in all geographical areas

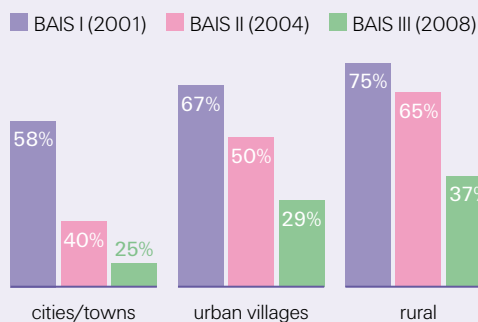
#### Knowledge of mother to child transmission by geographical location, 2001–2008



SOURCE: BAIS I, II AND III

### Rural households are likely to be less knowledgeable about HIV and to be more discriminatory

#### Proportion of respondents that agreed with at least one of three discriminatory statements about AIDS, 2001–2008



SOURCE: BAIS I, II AND III

13. This analysis tracks individuals answers to three questions testing their levels of discrimination and prejudice: i) If a member of your family became sick with HIV/AIDS, would you be willing to care for him or her in your household?; ii) If a teacher has HIV/AIDS but is not sick, should he/she be allowed to continue teaching in school?; iii) If you knew that a shopkeeper or food seller had HIV/AIDS, would you buy vegetables from them?

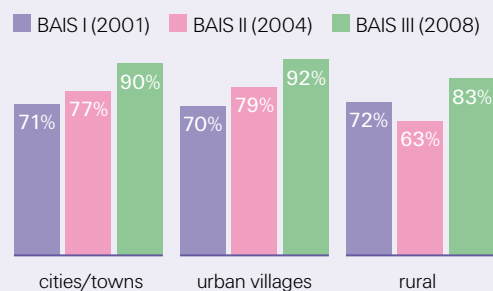


## Changing behaviour

Efforts to promote the use of condoms via better distribution and education appear to have paid off. Between 2004 and 2008 a systematic increase in condom has been observed in all location types with an increase in reported usage from 77% to 90% in urban cities and towns and from 79% to 92% in urban villages. In rural areas the rise has been even more dramatic, from 63% in 2004 to 83% in 2008.

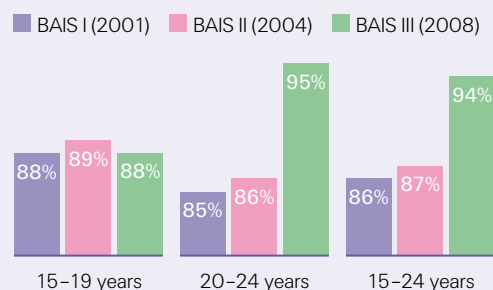
Despite this relative large increase among the rural population, the data suggests that condom use is still about 7 percentage points lower in rural areas than in urban areas. There are no disparities in condom use by age and gender.

Used condom at last high risk sexual encounter, by geographical location, 2001–2008



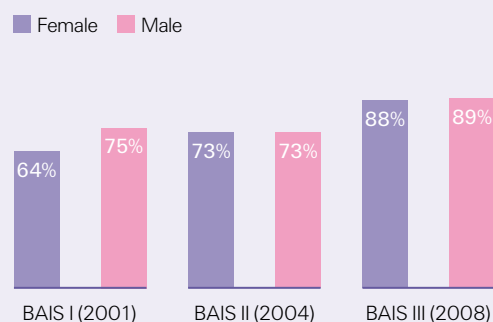
SOURCE: BAIS I, II AND III

Used condom at last high risk sexual encounter, by age, 2001–2008



SOURCE: BAIS I, II AND III

Used condom at last high risk sexual encounter, by gender, 2001–2008



SOURCE: BAIS I, II AND III

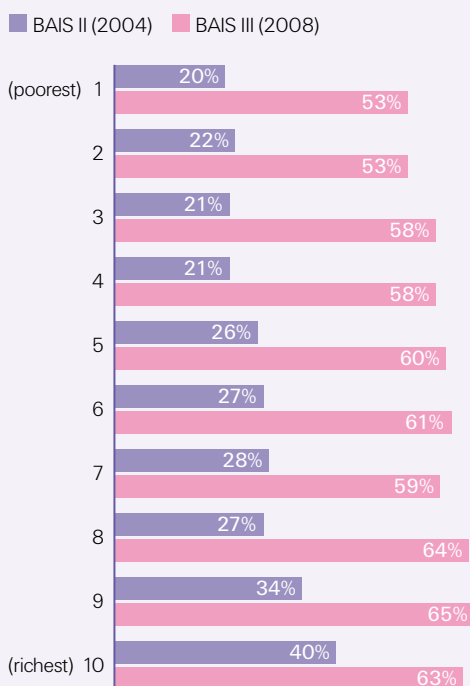
## HIV testing

HIV testing was offered through health facilities during the late 1980s. Now there are Voluntary and Counselling Testing Centres (VCTs) in all of the 27 health districts of Botswana. Since 2003, the government has increased the number of Voluntary HIV Counselling and Testing centres (VCT) that provide various free health services.

An analysis of the surveys suggests that HIV testing is higher among females than males. According to the BIAS III data, 67% of females reported having gone for an HIV test, much higher than the 51% of males that reported that they had been tested.

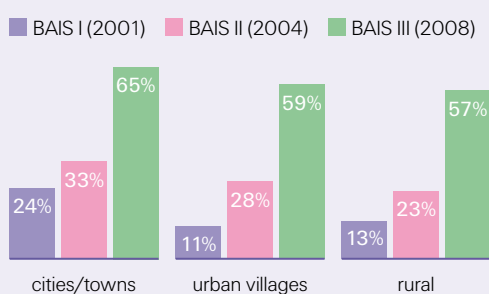
The prevalence of HIV testing has increased dramatically among all wealth deciles between 2004 and 2008, and it also appears as if income is playing a less important role in determining whether people get tested than it did before. The rapid increase in the prevalence of HIV testing is also observed across all regions. Across the three BIAS periods the data also show a narrowing of the gap in the prevalence of testing between rural areas versus cities and towns.

Prevalence of HIV testing by wealth decile, 2004 and 2008

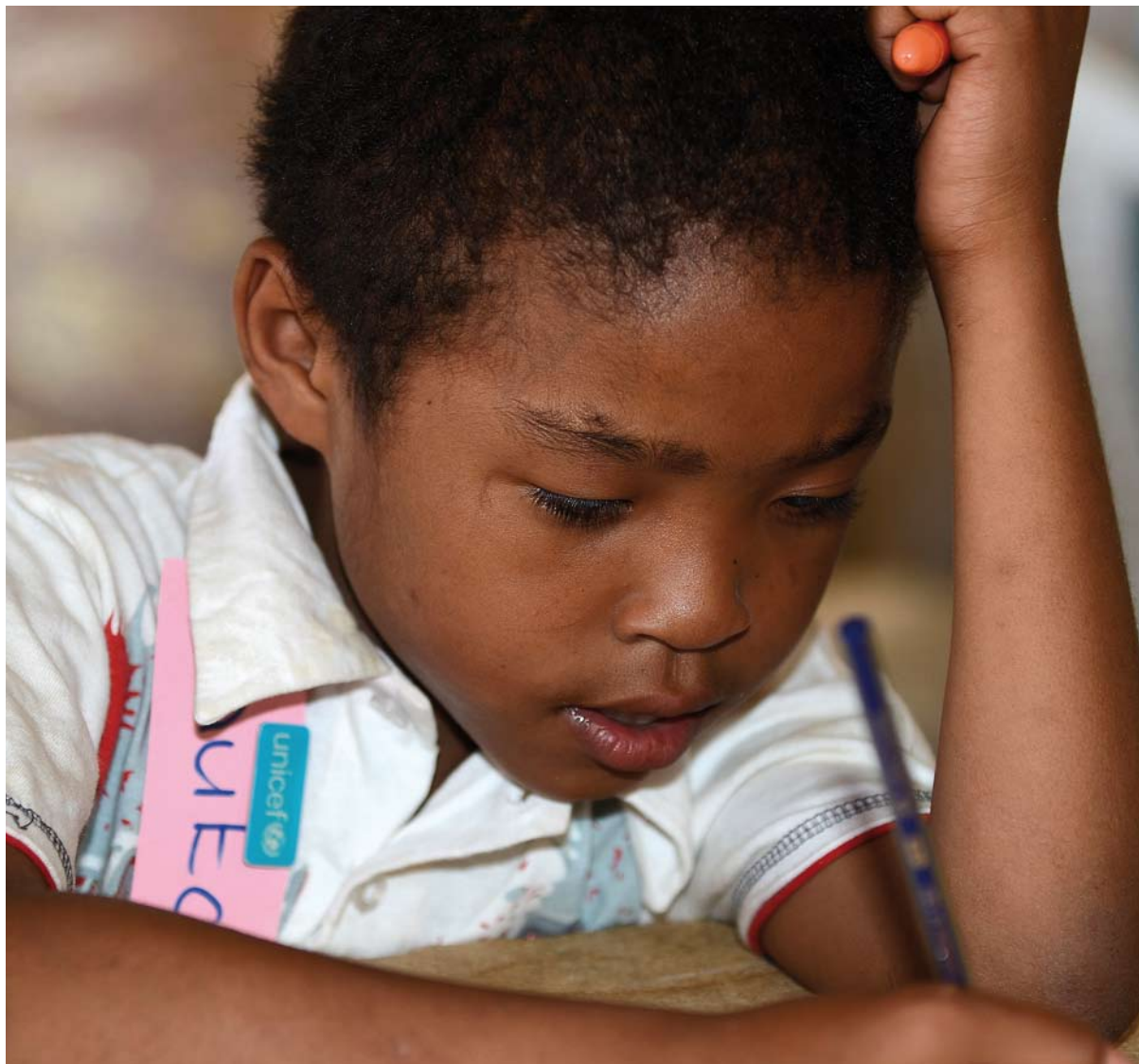


SOURCE: BIAS II AND III

Prevalence of HIV testing, by geographical type 2001–2008



SOURCE: BIAS I, II AND III



## Social protection for children

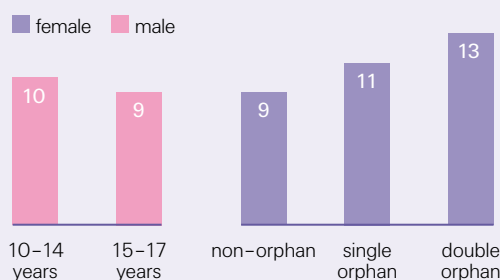
Botswana has a relatively comprehensive social protection system that dates back as far as the 1970s, and has a spectrum of conditional and unconditional programmes in place that provide protection in childhood, adulthood and old age. Of note with regards to children is the presence of various interventions to support child nutrition, and the recently adopted National Plan of Action for Orphans and Vulnerable Children (OVC).

While the majority of social protection<sup>14</sup> interventions in Botswana have not been evaluated, the findings from other countries relate that social protection plays a vital role in efforts to reduce vulnerability among the poor, facilitating equal access and opportunity in health and education in particular. Social protection has been found to increase child nutrition, improve school attendance and reduce child labour facilitated by the income transfers received by vulnerable households.

Botswana has made strong progress towards ensuring the well-being of its children. However, much more needs to be done to address existing disparities and to reach those in pockets of deprivation. Of additional importance is a better understanding of the risks and vulnerabilities that children face. Secondary analysis of the BFHS and BAIS highlights select aspects of risks for children and OVC in particular. The analysis indicates that:

- ▶ in 2008, 8% of children lived in households where a household member was critically ill;
- ▶ in 2008, there were approximately 1.2% of child headed households who would need comprehensive social protection to enable them to both support siblings and fulfil their own potential alongside those of their siblings (see section below for further discussion);
- ▶ orphans are least likely to have access to various basic services.

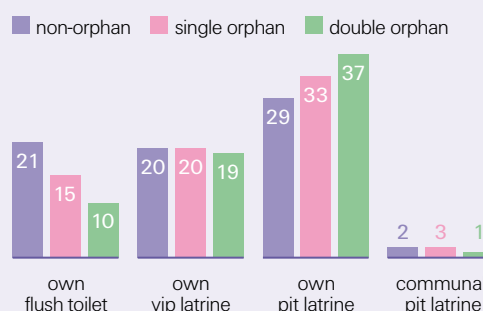
Percentage of children who lived in households with a critically ill household member by age and orphan status, 2008



SOURCE: BAIS III, 2008

Orphans are most likely to live in households with pit latrines

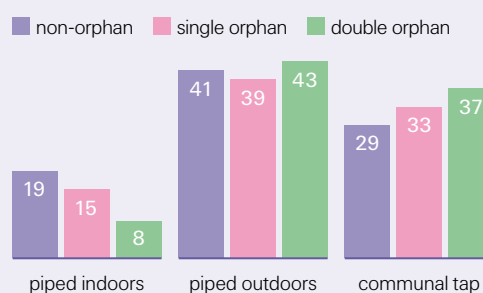
Percentage of OVC with access to sanitation, 2007



SOURCE: BFHS IV 2007

Orphans, in particular double orphans, are more likely to live in households with piped out door water

Percentage of OVC with access to sanitation, 2007



SOURCE: BFHS IV 2007

14. UNICEF et. al. (2009) define social protection to be the '...set of public and private policies and programmes that address poverty and vulnerability and exclusion as well as provide a coping mechanism throughout the life cycle'.

## Child headed households

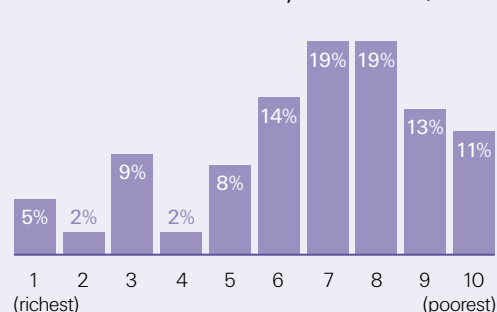
In 2007 and 2008, only a small fraction of all households in Botswana were headed by children. This number ranges from 0.7 to 1.2% between the surveys. Given the small proportion of child heads, further breakdown of estimates by for instance education or wealth decile have large standard errors.<sup>15</sup>

It is, however, possible to discern interesting and significant patterns across broader categories such as the three geographical types and the age categories. The analysis shows that child headed households tend to be poorer, are more prevalent in rural than in urban areas and are more likely to include double orphans.

According to the BFHS child heads were concentrated towards the top of the child age distribution with 40% of child headed households headed by a 17-year old, 26% headed by a 16-year old and 13% headed by a 15-year old.

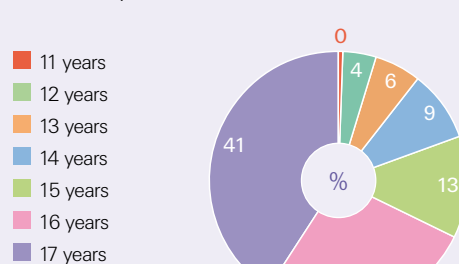
Survey<sup>16</sup> estimates indicate that between 0.7% and 1.2% of the population lived in child headed households. Most child headed households were among the poorer households. Interestingly, 80% of household members of these households were below the age of 19 in 2006, as would be expected, but the remaining 20% of those in child headed households were adults. This is counterintuitive, but could be due to disability of illness of adults or the adult's loose or temporary association.

Children headed households by wealth deciles, 2007



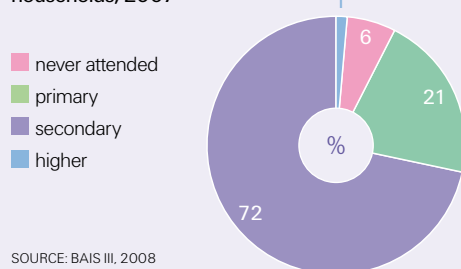
SOURCE: BFHS IV, 2007

Age distribution of the head of child headed households, 2008



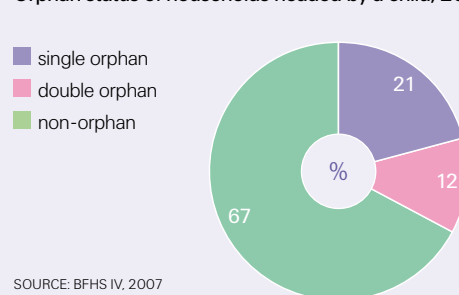
SOURCE: BFHS IV, 2007

Educational level of the head of child headed households, 2007



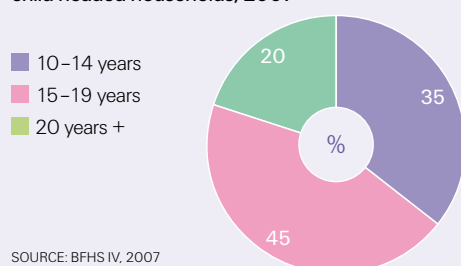
SOURCE: BAIS III, 2008

Orphan status of households headed by a child, 2007



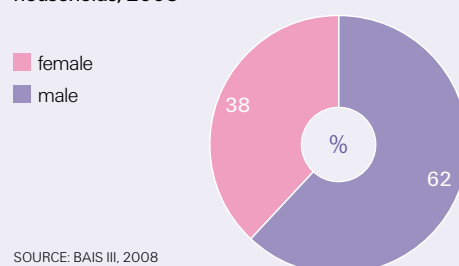
SOURCE: BFHS IV, 2007

Age distribution of household members living in child headed households, 2007



SOURCE: BFHS IV, 2007

Gender distribution of the head of child headed households, 2008



SOURCE: BAIS III, 2008

15. Consequently, because the graphs in this section of the report are based on a small number of observations they are indicative as opposed to representative.

16. BDS (0.6%), BFHS (0.7%) and BAIS II (1.2%)

## Child parental presence

A considerable proportion of Batswana children have lost either one or both biological parents. In 2006, 15% of all children were single orphans and 3% were double orphans.

Additionally, absentee parents are a significant issue in Botswana. A considerable fraction of children (7%) reported that they did not know the living status for one parent, suggesting that they were not in frequent contact with him/her.

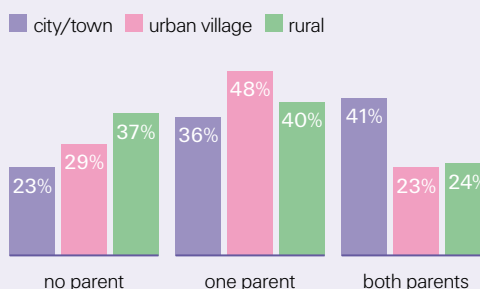
The majority of children live with only one of their biological parents (45% in the BDS and 42% in the BFHS IV). Around 30% of children (29% in the BDS 2006 and 32% in the BFHS IV) reported that they lived with neither of their biological parents. Just over a quarter of children lived with both their biological parents (27% in both the BDS and BFHS IV). Given that around 1% of children were in child headed households, this suggests that most of those not living with either parent lived with another adult guardian.

Children in wealthier households are more likely to live with both their parents. An analysis of the surveys indicates that children from households in the top three wealth deciles were far more likely to have both biological parents living with them (with the share ranging from 33–51% based on the survey) compared to the lowest asset deciles (17–27%).

These patterns also varied by geographical regions. Children from households residing in urban towns and cities are far more likely to be living with both biological parents (41% in 2006) than those living in urban villages (23%) and rural areas (24%). The prevalence of children living with non-biological parents was highest in rural areas where close to a third of rural children were not living with their biological parents. There are considerable regional differences in the proportion of children not living with either of their biological parents, ranging from 12% in Kgatleng to 23% in the North-West.

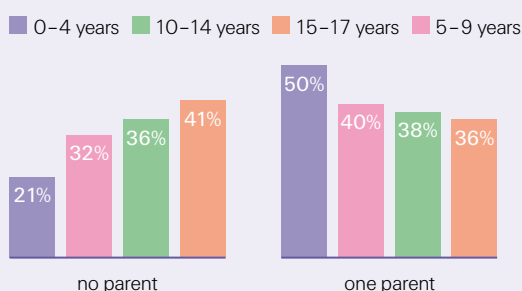
### Children from households residing in urban towns and cities are more likely to be living with their biological parents

Likelihood of living with biological parents by geographical location, 2007



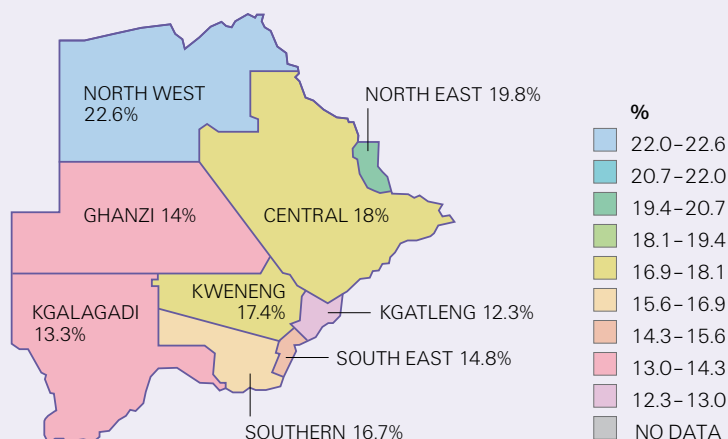
SOURCE: BFHS IV 2007

Likelihood of living with biological parents by age profile, 2007



SOURCE: BFHS IV 2007

Proportion of children who do not stay with a biological parent, by region



SOURCE: BDS, 2006



## Conclusion

**This report provides an overview of detailed analysis that could be of help to guide and enhance the targeting and design of policies, programmes and interventions for women and children. While these data sets have been analysed on a high level in previous studies, this initiative has added considerable depth and texture to existing knowledge.**



Most importantly perhaps, the analysis demonstrates that there are many significant associations between dimensions of need such as for instance remoteness, orphanhood, debilitating illness, poor education and inadequate sanitation. Women and children in need often face more than one of these challenges and understanding how these dimensions of need interact to trap and constrain vulnerable and desperate households is a vital component of responsive and effective poverty alleviation.

Secondary analysis of the surveys suggests that government policy has been effective in assuring equitable and almost universal access to some important health services, in particular vaccinations, antenatal care and ARVs.

However, in terms of child health outcomes, there are large differences in the infant and under-five mortality rates between wealth deciles and regions. These outcomes are known to be affected by socio-economic conditions and therefore one cannot make strong inferences on the quality of public services provided to poor communities based on these patterns. However, maternal mortality rates are often regarded as a reasonably reliable indicator of the quality of health services that is not severely affected by socio-economic conditions.

Even though Botswana's maternal mortality rates are lower than that of other countries in the region, there is room for improvement. These patterns suggest that government has made significant progress in terms of coverage and the focus of government effort should now shift to ensuring that the services that poor communities receive are responsive to their needs, valued by the beneficiaries and contribute to improving their lives in a substantive and enduring way.

Self-reported information from the surveys suggest that HIV/AIDS programmes seem to have had payoffs in terms of testing behaviour, condom use, knowledge about HIV/AIDS and attitudes towards people living with HIV and AIDS. However, pockets of stigma remain (especially in rural areas) and the society has been left deeply and severely scarred by the disease as evidenced by the high prevalence of orphanhood.

While this analysis has provided interesting perspectives, in many cases it also provided questions for further analysis. For instance, there is a need to better understand why health outcomes are so strongly correlated to socio-economic background, and to what extent this is due to differences in the quality of care provided to poor communities. Similarly, it could be useful to examine the ways in which the dimensions of need overlap via a composite index or through qualitative work.

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**United Nations Children's Fund**

Plot 27, UN Place (Annex)  
Matsitama Road, P.O. Box 20678  
Gaborone, Botswana

Telephone: (267) 3951909/3952752

Facsimile: (267) 3951233

[www.unicef.org](http://www.unicef.org)