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Cities & Citizens Series

Intra-Cities Differentials

Lusaka, Zambia

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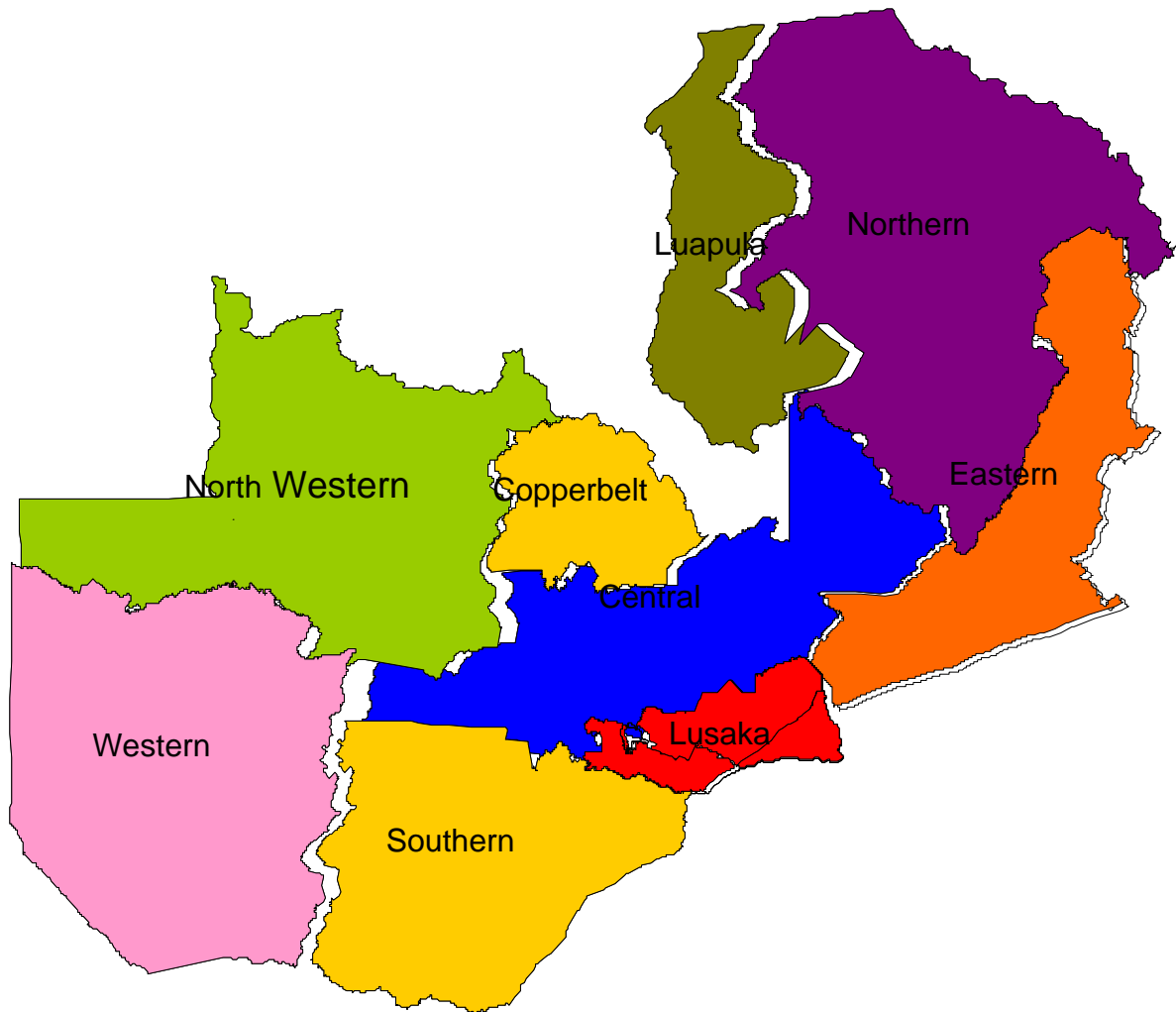
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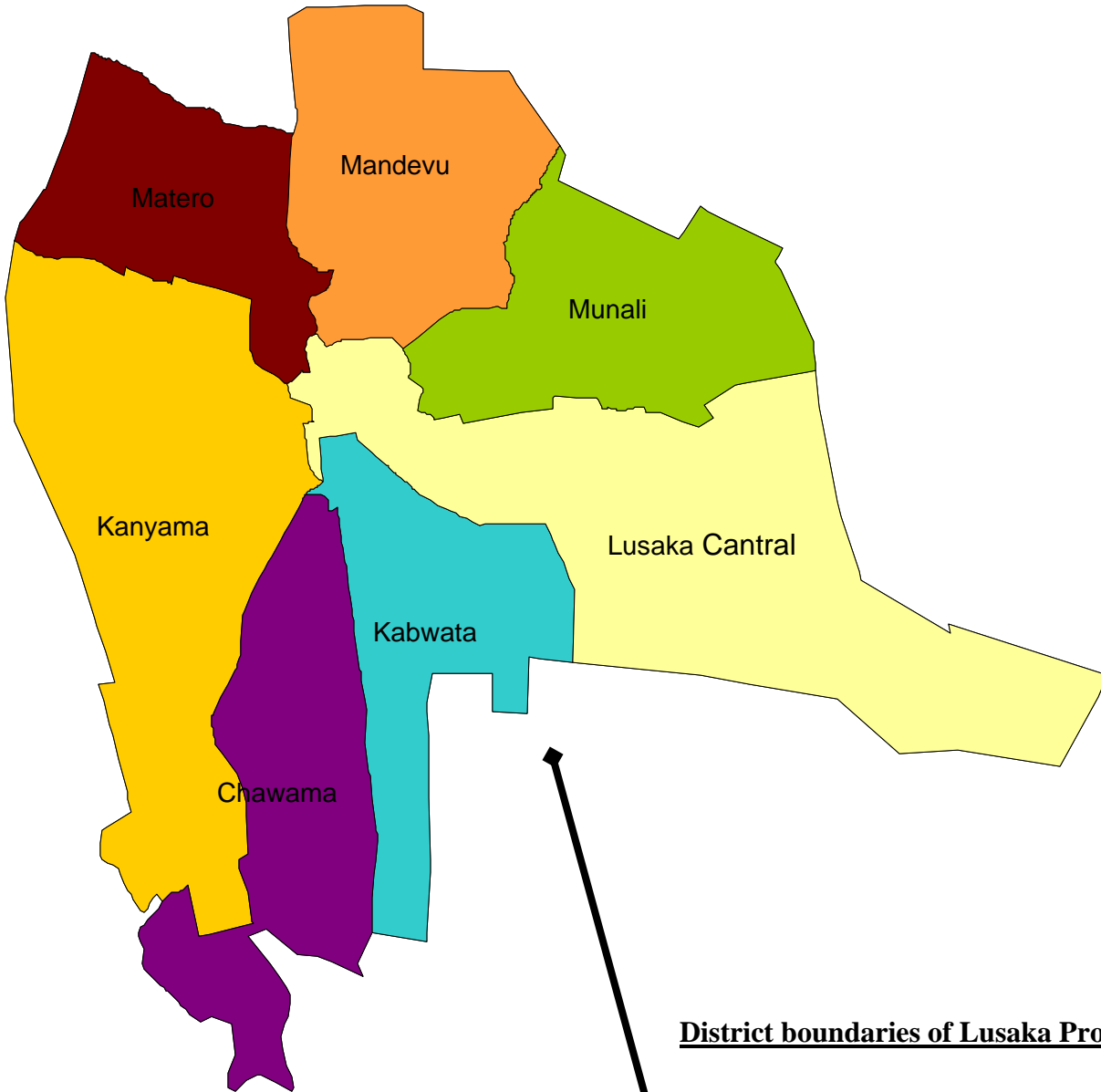
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MAP OF ZAMBIA

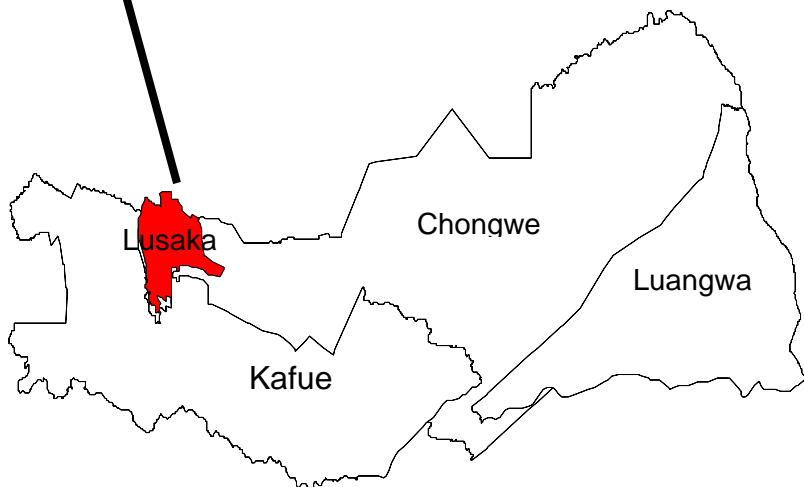
PROVINCIAL ADMINISTRATIVE BOUNDARIES



**MAP OF LUSAKA DISTRICT
CONSTITUENCIES ADMINISTRATIVE UNITS**



District boundaries of Lusaka Province



Chapter 1

Introduction

Urbanization, Poverty and Slum Development

The current population growth in the world has witnessed a new phenomenon where most of the population growth is occurring in the urban region. This trend is more pronounced in the developing world especially the cities in sub-Saharan Africa. Between 1950 and 1990, the percentage of the world population living in urban areas increased from 30% to 43% and is projected to reach 61% by 2030 whereas in sub-Saharan Africa the urban population was 15% in 1950, 32% in 1990, and is projected at 54% by 2030 (United Nations, 1996; 1998).

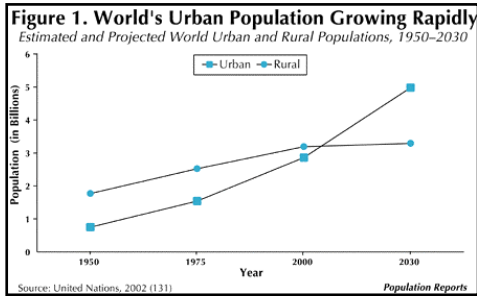
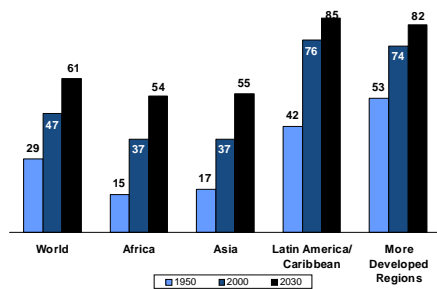


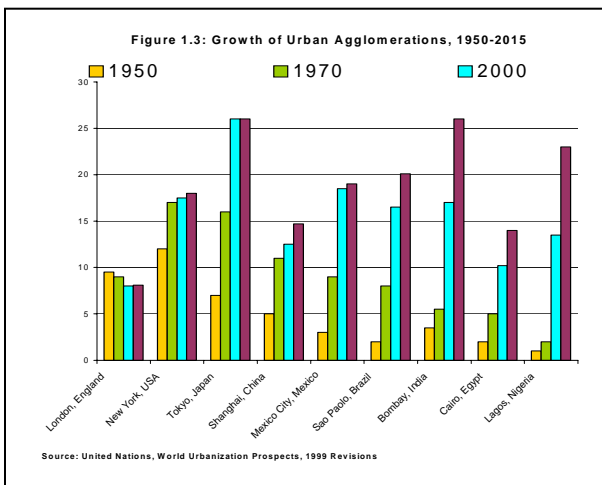
Figure 1.2: Trends in Urbanization, by Region
 Percent of Urban Population



Urban areas are often associated with ‘civilization’ and are seen as a hub of economic activity and growth, however this has not been the case in sub-Saharan Africa. The rapid urban growth in African countries in the past few decades has occurred amidst consistent decline in their economies.

The high growth rate amid poverty and limited resources has favored the development of slums and shantytowns in the urban areas of Africa. It is estimated that 41% of the urban residents live in poverty while about 2 out of five of these residents are said to live in circumstances deemed to be health and life threatening (UN-HABITAT, 2003). Also the proportion of the urban poor will increase faster than the overall urban population growth rate hence a proliferation of slum settlements.

Slum areas are characterized by poor housing, lack of access to basic services, clean water and exposure of residents to unsanitary



living conditions. Slum residents also experience poor health outcomes. The urban poor exhibit higher morbidity, have poor access to health services, and consequently exhibit higher mortality rates than residents from other population sub-groups (APHRC, 2002; Zulu, Dodoo and Ezeh 2002; Magadi, Zulu and Brockerhoff 2003). The worsening socio-economic circumstance of urban areas aggravates living conditions of resident populations and, in turn, worsens susceptibility to reproductive and health problems. Economic concerns incline women to have sexual relations with men, and many women maximize number of sexual partners to increase their security. The urban setting is also associated with social ills such as prostitution and teenage pregnancies especially among the unmarried (Zulu, Dodoo and Ezeh 2002). Urban areas are also known to have much higher rates of HIV prevalence. In many cities and large towns in sub-Saharan Africa, AIDS is already the leading cause of adult mortality.

Objectives of the Study

In September 2000, the General Assembly of the United Nations adopted the millennium declaration that assigned UN-HABITAT with the responsibility of monitoring the cities without slums initiative. The Millennium Development Goal (MDG) 7 Target 11 declares that “Have achieved by 2020, significant improvement in the lives of at least 100 million slum dwellers”. The indicators for this target will be the proportion of people with access to improved sanitation and the proportion with access to secure tenure. The Commission on Human Settlements and the General Assembly of the United Nations expanded the global monitoring and reporting functions of UN-HABITAT thus leading to the establishment of a specific programme entitled “Monitoring the Habitat Agenda”.

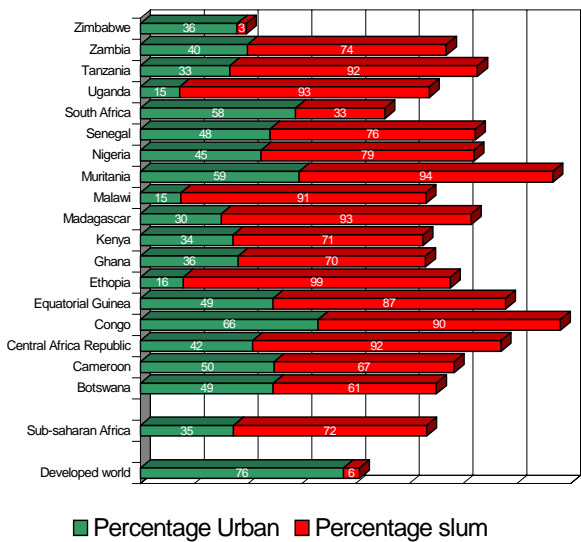
In order to fulfill their mandate, there is a need therefore for UN-HABITAT's Global Urban Observatory to assess and promote progress in the implementation of the Habitat Agenda and the attainment of the MDGs around the world.

To monitor the improvements in the lives of slum dwellers, an initial urban slum estimation at country level across the world based on secondary analysis of 295 data sources such as Demographic and Health Surveys (DHS), Multiple Indicator Cluster Survey (MICS), and Population and Housing Census among others. However, slum estimations do not reflect the internal urban inequalities entirely because the primary sources of data were not designed to do so, although they provide valuable inputs into the efforts to understand and address urban poverty (UN-HABITAT, 2003).

Need for Intra-City Level Differentials

Urban areas are commonly assumed to exhibit superior health and economic circumstances compared to rural conditions. This is attributed to urban aggregate level statistics that suggest that those living in large cities are better off and have more services than those living in the rural areas and or in smaller towns. This is misleading and it masks the large disparities found in most urban areas between the poor urban dwellers and the well-off residents in the urban centers. Averages provide a single level of poverty and other indicators overlooking the existing pockets of poverty and thus underestimate the urban poor and the conditions under which they live. The aggregate level statistics have also been used in the allocation of resources at country and even global scale where the bias has been towards rural areas thus disadvantaging the urban poor even more (UN-HABITAT, 2003).

Figure 1.4: Population urban and percent of urban population classified as slum, by country (UN-HABITAT, 2003)



Recent studies in the City of Nairobi have shown that children living in the slums of Nairobi have poorer health outcomes when compared to those living in the rural areas and those living in other smaller urban centers. More children in the slums of Nairobi die compared to children of other population sub-groups in the country, they also exhibit higher incidence of preventable childhood illnesses such as diarrhea and acute respiratory infections. Despite better coverage by health services in the city, health service utilization among slum residents is 60 percent lower than in the rural areas for these childhood illnesses (APHRC, 2002).

This shortcoming calls for a comprehensive, comparable and reliable information on the differentials that exist in large cities and towns. Intra-city level data is therefore very crucial to inform in addressing the inequity that exist in urban areas. Previously, estimates were provided where the contrast was between urban areas as a whole versus rural areas and these estimates are what have been guiding policy. In order to address the critical problems facing the urban poor, local policy needs to be informed about the vast living conditions of the slum residents compared to the non-slum residents. Data on intra-city differentials is very valuable for advocacy, policy and programming purposes by both the UN-HABITAT and other stakeholders.

The overall objective of this study is to conduct intra-city differentials in Lusaka by using existing methodology developed by UN-HABITAT to estimate the number of slum dwellers. Specifically, the study investigates how people's social and health status is associated with slum conditions and that slum status is not only limited to lack of shelter or basic services but it also implies lack of health, and social well-being.

Methodology for Defining Slum Populations and Data Sources

UN-HABITAT in close collaboration with United Nations Statistics Division (UNSD), the Cities Alliance as well as other stakeholders and experts, developed an operational definition for slum dwellers. A slum household is defined as a group of individuals living under the same roof lacking one or more of the following broad conditions:

- Access to improved water
- Access to improved sanitation facilities
- Sufficient living area that is not overcrowded
- Structural quality of the dwelling unit, and
- Security of tenure.

This definition was arrived at in order to set up an operational measurement of slums using data that is routinely collected at national and sub-national levels. In developing countries, lack of access to improved water and lack of access to improved sanitation are coincident with the other classifiers for slum dwellers and together account for the identification of most slum dwellers (UN-HABITAT, 2003).

Use of Secondary Data for Intra-city Differentials

In addition to censuses, several countries routinely carry out surveys that are representative of the entire population of the country. The most notable surveys are the Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS) and the Living Standards Measurement Study (LSMS).

This study uses secondary data i.e. the Demographic and Health Survey data and the census data from Zambia to investigate the social and health differentials between the slum and non-slum

residents of Lusaka City. DHS are household surveys with large sample sizes (usually between 5,000 and 30,000 households that provide data for a wide range of monitoring and impact evaluation indicators in the areas of population, health, and nutrition. Typically, DHS surveys are conducted every 5 years, to allow comparisons over time (Measuredhs, 2004).

The most current Census of Population and Housing in Zambia was carried out on November 2000. The main objective of the census was to determine the size of the population its composition and distribution, levels and trends of fertility, mortality, information on housing, economic activity and migration. This was the fourth census in the history of census undertaking in Zambia. The other three censuses were carried out in 1969, 1980 and 1990.

Three Demographic and Health Surveys have been carried out in Zambia. The surveys were carried out in 1992, 1996 and 2001/02. This study utilizes all the three surveys to examine the intra-city differentials in Lusaka and the trends over time (CSO, 2003).

Identification of Slum Residents using Zambia Demographic and Health Survey (ZDHS) Data

Due to the limitation in the data, security of tenure and several aspects of structural quality of the dwelling unit have been excluded in defining slum dwellers. Access to improved water, access to improved sanitation, sufficient living area and structural quality have been used in the definition.

Access to improved water

A household is considered to have access to improved water if it has sufficient amount of water per day (20 liters of water per person per day), at an affordable price, available to the household

without being subject to extreme efforts especially to the women and children.

Table 1.1 Definition of variables on access to improved water	
Non-Slum households	Slum Households
1992 DHS Survey	
Takes less than 60 minutes to collect water from source	Takes more than 60 minutes to collect water from source
Piped into residence	Well in residence
Public tap	Public Well
	Spring
	River, stream
	Pond, Lake
	Tanker truck
	Other sources
1996 Survey	
Takes less than 60 minutes to collect water from source	Takes more than 60 minutes to collect water from source
Piped into residence	Well in residence
Public tap	Public shallow well
	Public traditional well
	Spring
	River, stream
	Pond, Lake
	Other sources
2001/02 Survey	
Takes less than 60 minutes to collect water from source	Takes more than 60 minutes to collect water from source
Piped into dwelling	Open well in yard or plot
Piped into yard/plot	Open public well
Communal tap	Open well at neighbor's residence
	Spring
Piped into neighbor's residence	River or stream
Protected well in yard or plot	Pond, Lake or dam
Protected public well	Tanker truck
Rain water	Other sources
Bottled water	
Data Limitations	
Number of households sharing a public water source *	
Well or borehole is protected [†]	
Cost of water used by household*	
Quantity of water consumed per household per day *	
Seasonality of water availability by source*	
Information on multiple use of water sources is not available*	
* All surveys † 1992 & 1996 survey	

Households that had piped water and protected wells or boreholes were considered as non-slum households. Also if the households take less than one hour to collect water, this was considered as a non-slum household.

There are limitations in defining access to improved water using the ZDHS. Communal or public taps should not serve more than 5 households for the households to be considered as having access to improved water source. This information is lacking in the data and it is therefore not possible to determine the number of households sharing a public water source.

Classification of categories of water sources is not uniform for the three data sets. The 1992 and 1996 data does not have information on whether a well is protected or not. Other useful information lacking in the data include the cost of water consumed by the household, the amount of water consumed by the household per day as well as information on seasonality (if any) of the water source used by the household. Information was collected only on the main source of water used, other sources though not used on a regular basis, might lack in quality hence a misrepresentation of the situation.

Access to improved sanitation

A household is considered to have access to improved sanitation if an excreta disposal system, either in the form of private toilet or public toilet shares with a reasonable number of people is available to the household members.

Households with a flush toilet and ventilated improved pit latrines were considered to be non-slum. Information on the number of households sharing a particular source is lacking in all

the three ZDHS surveys. The working condition of the toilet facility can also not be determined from the data. This includes information on whether the flush toilets are connected to public sewers or septic tanks.

Table 1.2: Definition of variables on access to excreta disposal

Non-Slum households	Slum Households
1992 DHS Survey	
Own flush toilet	Traditional pit latrine
Shared flush toilet	No facility or use open field or bush
Ventilated Improved pit latrine (VIP)	Other types of toilet facilities
1996 Survey	
Own flush toilet	Traditional pit latrine
Shared flush toilet	No facility or use open field or bush
Ventilated Improved pit latrine (VIP)	Other types of toilet facilities
2001/02 Survey	
Own flush toilet	Traditional pit latrine
Shared flush toilet	No facility or use open field or bush
Ventilated Improved pit latrine (VIP)	Other types of toilet facilities
Data Limitations	
Number of households sharing a public toilet*	
Working condition of the toilet*	
*All surveys	

Sufficient living area/ No overcrowding

A dwelling unit is considered to provide a sufficient living area for the household members if there are fewer than three persons per habitable room. Other measures of overcrowding include the in-house living area per person, the number of households per area, the number of persons per bed and the number of children under five per room.

Data on the number of persons per room is available for the 1992 survey only. The number of rooms used by a household was however not captured in the 1996 and 2001/02 surveys. All the other measures mentioned above such as the habitability of the room, the in-house living area per person, the number of households per area, the number of persons per bed and the number of households per area are lacking in the data.

Table 1.3: Definition of variables on durability of dwelling

Non-Slum households	Slum Households
1992 DHS Survey	
Parquet or polished wood floor	Earth or sand floors
Terrazzo tiles	Wood planks
PVC tiles	Other type of floor materials
Cement floor	
Carpeted floor	
1996 Survey	
Wooden Tile	Earth, sand or mud floors
Ceramic tiles	Wood planks or boards
Cement or Concrete floors	Other type of floor materials
2001/02 Survey	
Parquet or wood tiles	Earth, mud or Dung floors
Floors made of bricks	Wood Planks
Terrazzo or Ceramic tiles	Other type of floor materials
Concrete or cement floors	
Carpeted floor	
Data Limitations	
Wall and roofing materials*	
Location in non-hazardous locations*	
Types of different materials used*	
Quality of housing	
*All surveys	

Structural quality/Durability of dwelling unit

A house is considered as durable if it is built on a non-hazardous location and has a structure permanent and adequate enough to protect its inhabitants from the extreme climatic conditions such as rain, heat, cold or humidity.

This information can be assessed using the materials used to construct the house such as the roofing material, wall and type of floor. The location of the house can also be used to determine whether it is located in a non-hazardous location. The three ZDHS surveys only have information on the type of floors.

Chapter 2

Overview of the Study Area

Zambia Country Profile

Background History

The location and history of Zambia has a direct bearing on the urbanization trends in the country. Zambia is a land-locked country covering an area of 752,612 square kilometers that makes up about 2.5 percent of the African Continent. It shares borders with the Democratic Republic of Congo (DRC) and Tanzania in the north; Malawi and Mozambique in the east; Zimbabwe and Botswana in the south, Namibia in the southwest and Angola in the west. The pre-colonial history of what was to become present day Zambia at the end of the 19th century is fragmentary and based largely on tribal oral tradition. The first contact with foreign settlers was in 1899 when the British South Africa Company received a Royal Charter which empowered it to exercise complete administrative control. In 1923 the British S.A. Company handed it over to the British Government and it became part of the British protectorate that extended into present day Zimbabwe and Malawi. Following the dissolution of the Federation on 31 December 1963, a new constitution came into effect in January 1964 giving the territory internal self-government and on 24 October the same year, Zambia became an independent state (CSO, 2003).

Economy

Zambia has a mixed economy consisting of a modern urban sector that, geographically, follows the old line of rail and a rural

agricultural sector. For a long time, the modern sector has been dominated by parastatal organizations, while private businesses have dominated construction and agriculture sectors. The introduction of a liberalized market-oriented economy in 1991 has seen the privatization or liquidation of most parastatals.

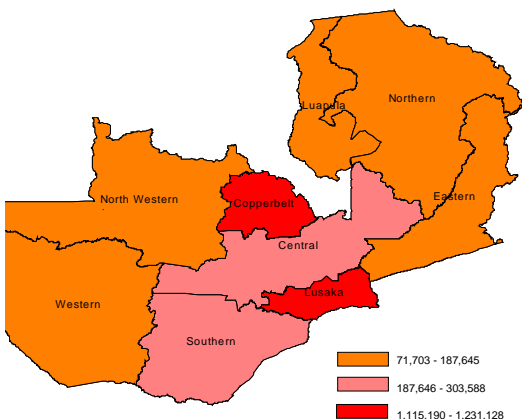
Copper mining is the country's main economic activity, accounting for 95 percent of export earnings and contributed 45 percent of government revenue during the decade following independence (1965-1975). In the mid-1970s following a sharp decline in copper prices and a sharp increase in oil prices, the country's economy deteriorated. Attempts were made to minimize dependency on copper exports by diversifying the economy through the creation of import substitution parastatals.

The 1980s marked the start of the first phase of implementing Structural Adjustment Programmes (SAP). However, the SAP failed to substantially alter the economy resulting in high poverty levels among the majority of the population. As at 1998, 73 percent of Zambians were classified as poor. The country is currently implementing vigorous programs aimed at poverty reduction and stimulating economic growth. The Transitional National Development Plan (TNDP) and Poverty Reduction Strategy Paper (PRSP) aim at reversing the country's deteriorating social economic conditions and attaining sustainable economic growth. This is being done through a multi-sectoral approach in which, agriculture, tourism, manufacturing and mining sectors serve as the engines of growth (CSO, 2003).

Population and administrative units

The 1980, 1990, and 2000 national censuses reported total populations of 5.7 million, 7.8 million and 9.9 million respectively. The population grew at an average annual growth rate of 3.1

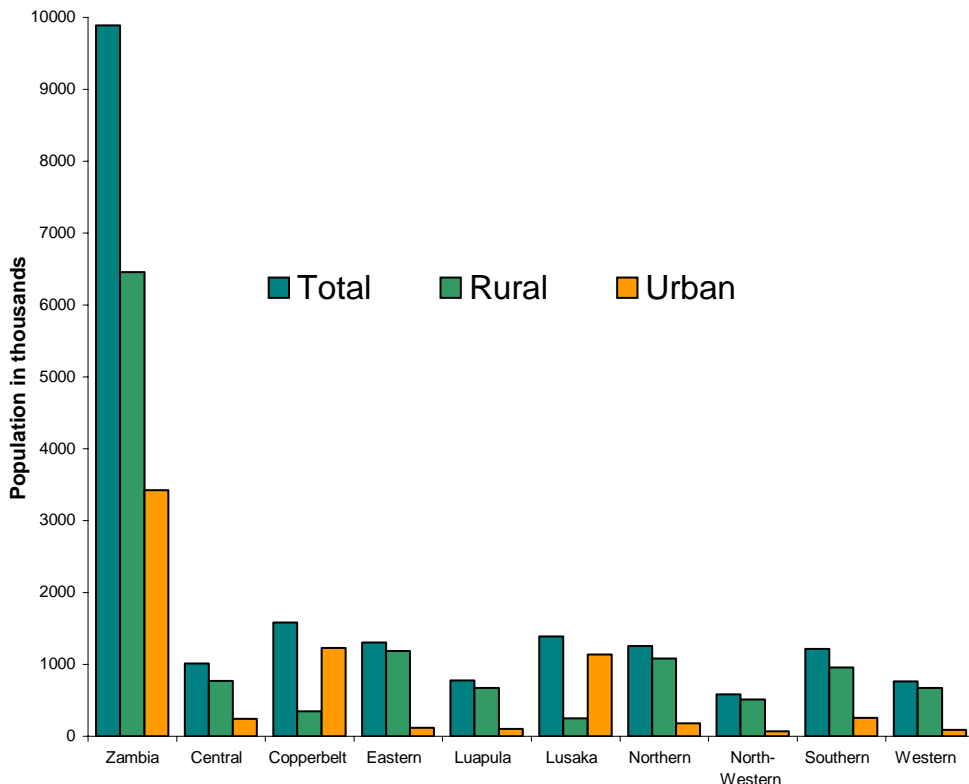
Total population by provinces, Zambia



Source: Zambia 2000 Census of Population and Housing, CSO, 2003

percent between 1969-1980, 2.7 percent between 1980-1990, and finally 2.4 percent during the period, 1990-2000. Forty-five percent of the population is below the age of 15, resulting in a median age of 17 years. Hence the country has a young population with an in-built potential to grow for many years to come. According to the 2000 Census of Population and Housing, 65 percent of the population lives in rural areas, while 35 percent live in urban areas. Administratively, the country is divided into nine provinces. Of the nine provinces, two are predominantly urban, namely Lusaka and Copperbelt provinces. The remaining provinces namely Central, Eastern, Northern, Luapula, North Western, Western and Southern, are predominantly rural. The country is further divided into 72 districts, 150 Constituencies and 1286 wards (CSO, 2003).

Figure 2.1: Total Rural-Urban Population by Province, 2000



Source: Population and Housing Census, 2000

Zambia's fertility has continued to decline although at a slow pace. The drop in urban childbearing is the principle reason for the overall decline in fertility levels in the country. The Total Fertility Rate (TFR) for rural areas estimated at 6.7 is higher than the 4.9 estimated for urban areas. Compared with other sub-Saharan countries, Zambia's TFR at 6.0 remains among the highest in the region. Infant mortality rate has declined by about 12 percent in the period 1990-2000. However, the IMR is still high, with about one in every nine infants dying before reaching their first birthday. Similarly, Childhood mortality rate has also declined by 13 percent in the period 1990 and 2000, from 95 to 82 death per 1000 births. Under-five mortality, however has recorded an increase of seven percent in the period 1990 to 2000, with about one in six under-five children died before their fifth birthday. The decline in the IMR has led to an increase in the Life Expectancy at birth from 47 years in 1990 to 50 years in the year 2000.

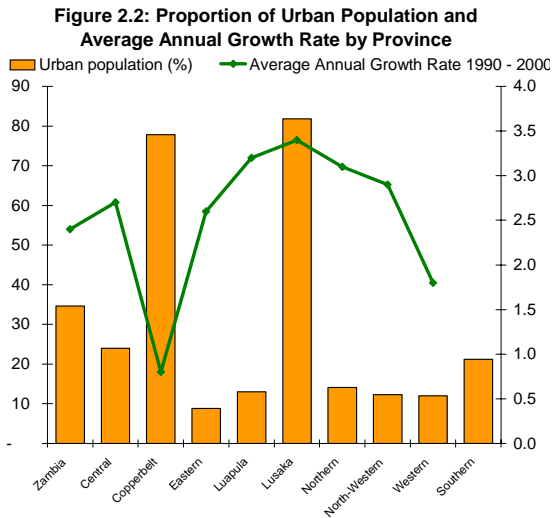
Urbanization in Zambia

Zambia is the third most highly urbanized country in sub-Saharan Africa. Of its total population, close to 40 percent is estimated to live in urban areas. The country has eight major towns with populations in excess of 150,000; most of these are in the Copperbelt province. During the 1960s and 1970s, the production and export of copper led to an expansion of the urban economy. Zambia experienced high levels of rural-urban migration, as citizens sought to benefit from urban-based employment opportunities and subsidized food and infrastructure. Lusaka province continues to be the main destination for rural migrants, closely followed by the Copperbelt province. The remaining provinces are largely agriculture-oriented and do not attract large

numbers of migrants. A relatively new immigration phenomenon is the influx of refugees from neighboring countries that have experienced or are experiencing conflict.

Zambia’s economic decline has eroded many of the benefits of urban living. Recent poverty assessment reports estimate that almost 80 percent of the urban population lives below the poverty line. Poverty and HIV/AIDS have led to decreased urban growth rates in recent years between 5 and 6 percent. During the copper boom that followed the country’s independence, Zambia’s cities developed quickly and, from a spatial viewpoint, inefficiently. Previously, towns were not intended to be permanent homes for the majority of the country’s workers; thus, legal tenure and the provision of housing and amenities for informal residents were not considered priorities. With prosperity and rapid urbanization, the republic’s new government installed sophisticated and costly urban infrastructure, confident that copper export earnings would provide for its support and maintenance. In fact, however, the infrastructure soon became dilapidated due to operation and maintenance costs. With the decline in the economy and high external debt, poverty and lack of a sustainable housing policy have led to urban growth being absorbed into informal settlements (World Bank, 2002).

During the inter-census period (1990 – 2000), Lusaka province registered the highest growth rate with the lowest registered in the Copperbelt (CSO, 2003). Copperbelt province which used to be the preferred destination for migrants in the earlier decades due to the economic boom from copper mining, is no longer the case. Instead, migrants from rural areas and also those from the urban centers within the Copperbelt province are now migrating into Lusaka.



The Development and Growth of Lusaka City

Lusaka, city, situated at an altitude of about 1300 m (about 4265 ft) on a plateau is Zambia's chief administrative center and a major financial, transportation, and manufacturing hub. Diversified industries, some powered by the Kariba hydroelectric project on the Zambezi River, include food processing, motor-vehicle assembly, and the manufacture of clothing and electronic equipment. Railroads connect the city with Livingstone, to the south, and with Ndola and other centers of the copper-belt mining region, to the north (City Council of Lusaka, 2004).

The development of Zambia's urban centers dates back to the early 1930s. Urbanization in Zambia has largely resulted from the copper mining industry which transformed the economy from a stagnant one based on labor migration to the Southern African mines and farms in the early years of colonial rule, to a vibrant economy based on a growing mining industry in the post war period. The mining industry however began to stagnate and decline in the mid 1970s with the situation worsening in the 1980s. Most of the cities and towns in Zambia have emerged either along the railway line or around the copperbelt mines (World Bank, 2002).

Lusaka started as a railway siding in 1905 when the railway line that was constructed primarily to transport copper from Katanga Province in the present day Democratic Republic of Congo to the seaports of South Africa, reached Lusaka. The original size of Lusaka was a narrow strip of land along the railway line, 5 km in length and 1.5 km wide with the railway being at the centre. The city has since been extended to 360 square km, while a recently completed integrated development plan proposes to extend the city boundary beyond this to bring the Lusaka International Airport and a substantial amount of rural land within the city boundary.

The rapid growth of Lusaka, however, began in earnest in 1935 when the capital moves from Livingstone to Lusaka. Lusaka did not possess the scenic attraction of Livingstone neither was it endowed with the mineral resources like the Copperbelt. The town's main attribute was its central location and healthy climate. It lies at an intersection of the main roads to the north and south, and east and west. Lusaka was also within easy reach of the Copperbelt, the country's economic heartland. Unlike other equally central locations, Lusaka had substantial underground water resources, which could provide the city with adequate water all through the seasons. In 1960 Lusaka was conferred a City status while in 1970 Greater Lusaka was created by the extension of boundary from 39 kilometers (36 square miles) to 360 square kilometers (139 square miles). It becomes a province in 1976. It has grown to become the seat of the Government of the Republic of Zambia and as such all diplomatic missions, international organizations, industrial and commercial entities have set base here. Its political, social, economic and cultural significance has also increased through the years.

The population growth of the city increased most dramatically after 1948 and after the attainment of political independence in 1964. Between 1963 and 1969, the population grew at over 13 per cent and added nearly 140,000 people to the population of the city, which led to the doubling of the city's population from 123,146 in 1963 to 262,425 in 1969. The population of Lusaka also doubled between 1969 and 1980, from 262,425 to 535,830. The population growth rate, however, declined in the post 1980 period, due to the slowdown in the expansion of employment, which resulted in reduced immigration from the rural areas. Since 1970, the main source of population growth in the last two decades has mainly been through natural increase because those who immigrated to the

city from the rural areas in the 1960s and 1970s were predominantly young. Due to a higher concentration of young people, Lusaka has had higher population growth rates than Zambia as a whole even after the decline of rural-urban migration (Mulenga, 2003).

Growth of slums and Informal Settlements in Lusaka

With the rise in copper production in the copperbelt in the immediate post war period due to high demand for copper in the international market, urban centers also began to grow at a rapid pace resulting in widespread shortage of low-income housing. The passing of the African Housing Ordinance in 1948 that allowed African workers in urban centers to live with their families also worsened the housing shortage. In response to the housing shortage the government allowed the development of self-help African housing on the outskirts of the main urban centers and passed the Private Locations Ordinance that did not insist on the statutory building standards. This was essential, because most African workers were generally not highly paid, the majority of them could not as a result afford to build houses that could meet the urban housing standards. The early African self-help urban housing areas were therefore located just outside the town boundaries, but within easy reach of the working areas. The African workers who were allocated plots in the early African self-help urban housing areas were permitted to build houses and pit latrines on the plots using cheaper unconventional building materials.

The self-help urban housing residential areas were clearly inadequate, because unauthorized settlements emerged on agricultural land, nearly in all directions of the city with the exception of the eastern side where Kalingalinga, was the only unauthorized settlement. These unauthorized settlements in Lusaka

were thus concentrated on the western, southern and northern sides of the city. The authorized self-help urban housing was, on the other hand, entirely on the western side of the city boundary. The low concentration of unauthorized urban self-help housing on the eastern city boundary was due to the quality of the land and land tenure, as well as the eastern boundary of the city being distant from the industrial areas and the CBD where low-income urban employment could be obtained. The unauthorized self-help urban housing areas generally emerged on privately owned agricultural land on the western, southern and northern parts of the immediate outskirts of Lusaka. A few of these unauthorized urban settlements also emerged on former construction sites that had been built on land zoned for other purposes (Mulenga, 2003; World Bank, 2002).

Legislation and Policy on Upgrading of Low Income Settlements

In general, there appears to be a sufficient policy and legislative framework in Zambia regarding the legalization of unplanned and informal settlements. Both the central and local governments acknowledge the need to recognize and regularize such settlements.

Currently, the majority of land on which informal settlements are situated is publicly owned. The Department of Physical Planning and Housing in the Ministry of Local Government and Housing considers regularizing an unplanned/informal settlement if it meets the following criteria:

- 60 percent or more of the land on which the settlement is located is publicly owned,
- The settlement has been in existence since 1974,
- Development for which the land is zoned on the city's development plan is not imminent,

- 50 percent or more of the dwelling structures in the settlement are constructed of conventional materials.

Normally, after a settlement is declared an “improvement area,” the city council is able to issue 30-year occupancy rights. Most occupants of houses in informal settlements deem this to be an acceptable form of tenure that gives them adequate security. The 30-year occupancy license is renewable. In spite of this, there does not appear to be a clear policy and strategy as to how to deal with informal or unplanned settlements, and much of the existing legislation needs to be modified and streamlined to ensure that it is relevant and enabling.

However, various attempts have been made, in terms of legislation and policy, to regularize informal settlements and bring them into the fabric of the towns and cities, but progress in the implementation of regularization schemes has been slow and hampered by financial and human resource constraints at both the national and local government levels. Numerous government requirements also appear to hamper the provision of basic infrastructure and services to appropriate, affordable standards and the granting of secure tenure to existing informal settlement occupiers.

Various donors and NGOs, together with local administrations, are attempting to address some of the problems related to upgrading in Zambia and are implementing a number of well-intentioned initiatives, particularly in Lusaka and the community demonstration projects in the Copperbelt. These initiatives are not, however, framed within an overall national policy for low-income, unplanned/informal settlements. It is likely that greater efficiencies and more consistency would come from initiatives being guided by an overall policy and by a clear strategy for implementing that policy. Issues addressed would need to include land, tenure,

landlord/tenant rights, standards, service levels, coverage, community participation, operation and maintenance, as well as cost recovery and sustainability (World Bank, 2002).

Chapter 3

Shelter

Adequate Housing

Households, which live in slums, usually occupy non-durable dwelling units that expose them to high morbidity and then mortality risks. A housing structure is considered durable when certain building materials are used for roofing, construction of walls and floors. Even though some houses may be built with materials classified as durable, the dwellers may still not enjoy adequate protection against weather and climate due to the overall state of the a dwelling

The housing condition is known to have an impact on the health status of the occupants. For example mold and dampness in living areas has been know to be strongly associated with increased respiratory symptoms and increases susceptibility to disease such as asthma. Over the years, there has been an improvement in slum households that have durable floor materials in Lusaka.

Most of the houses in Lusaka are constructed using durable materials that is, stone walls and iron sheet roofing. Concrete block are readily available and affordable as by-products from the mining industry.

[Picture 1]

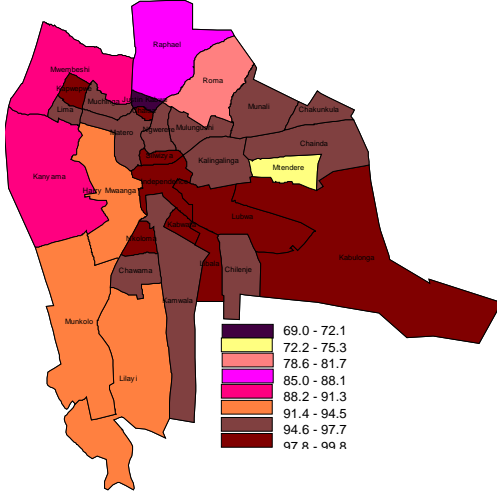
Illegal settlements with very poor housing materials are coming up along the railway lines within the city and if left unchecked this could mushroom into slum areas with very poor housing conditions.

[Picture 2 & 3]

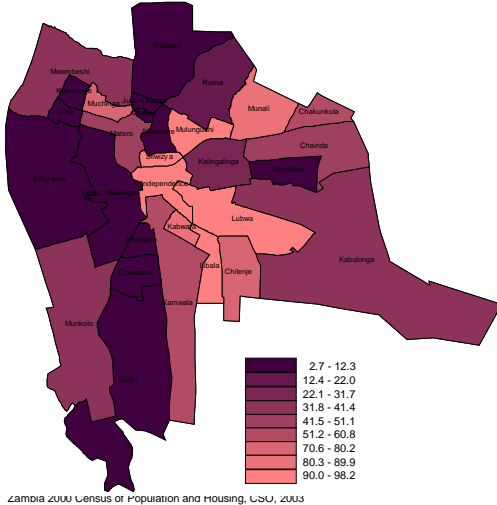
Access to safe water

Water is one of the greatest necessities of human life, which is taken for granted in the developed world. A supply of clean water is absolutely necessary for life and health, yet almost 2 billion people lack access to adequate water supply or can only obtain at high prices. In many cities, households in informal settlements are rarely connected to the network and can only rely on water from vendors at up to 200 times the tap price. Improving access to safe water implies less burden on people, mostly women, to collect water from available source. It also means reducing the global burden of water-related diseases and the improvement in the quality of life. Access to safe water promotes Habitat Agenda Goal aimed at promoting access to basic services.

Households with access to safe drinking water



Households with access to sanitary means of excreta disposal



ZAMBIA 2000 Census of Population and Housing, CSU, ZUS

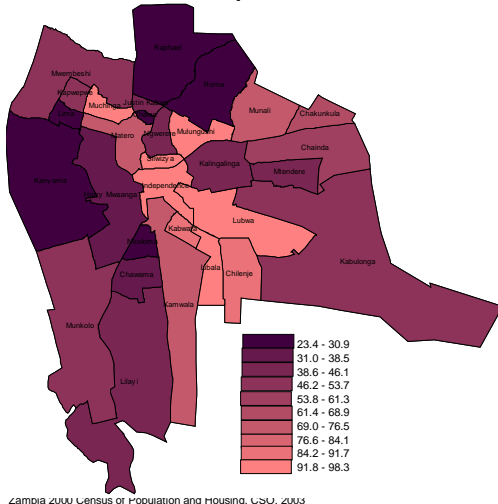
Almost all the households in Lusaka including those in the informal settlements have access to safe drinking water. However the households in the informal settlements of Lusaka spend a lot of time collecting water from the various sources. Household members have to walk long distances to collect the water since the water points are few. In some of the settlements, the public taps are operational for only a few hours in a day and this can lead to spending long hours in queues.

[Picture 4]

Access to improved sanitation

Lack of sanitation is a major public health problem that causes disease, sickness and death. Highly infectious excreta-related diseases such as cholera still affect whole communities in developing countries. Diarrhea which is spread easily in an environment of poor hygiene and inadequate sanitation, kills about 2.2 million people each year, most of them children under five.

Households with access to electricity



Zambia 2010 Census of Population and Housing, CSO, 2013

Inadequate sanitation, through its impact on health and environment, has considerable implications for economic development. People miss days at work due to sickness resulting from excreta-related diseases. Moreover, lack of excreta management poses a fundamental threat to global water resources. Good sanitation is important for urban and rural populations, but the risks are greater in slum areas where it is more difficult to avoid contact with waste. Access to improved sanitation promotes Habitat Agenda Goal to promote access to basic services.

Majority of households in Lusaka city do not have access to improved sanitation. Most rely on traditional pit latrines or no facility thus exposing them to the dangers of contamination that can result in high morbidity and mortality.

Connection to services

The quality and reliability of local services are taken for granted in highly industrialized countries, but limited access to or poor quality of infrastructure services in developing countries can be a major impediment to business productivity, and a major source of frustration to the population. The poorest households in developing countries generally cannot afford household connections of telephone and electricity and often only have access to primitive or communal water supply and sewerage and solid waste disposal systems. As well as reducing the quality of life in settlements, the absence of connections to basic services makes communities living in informal settlements particularly vulnerable to disease and epidemics.

Access to electricity in Lusaka is limited to only a few households. Access to electricity can help boost small scale businesses

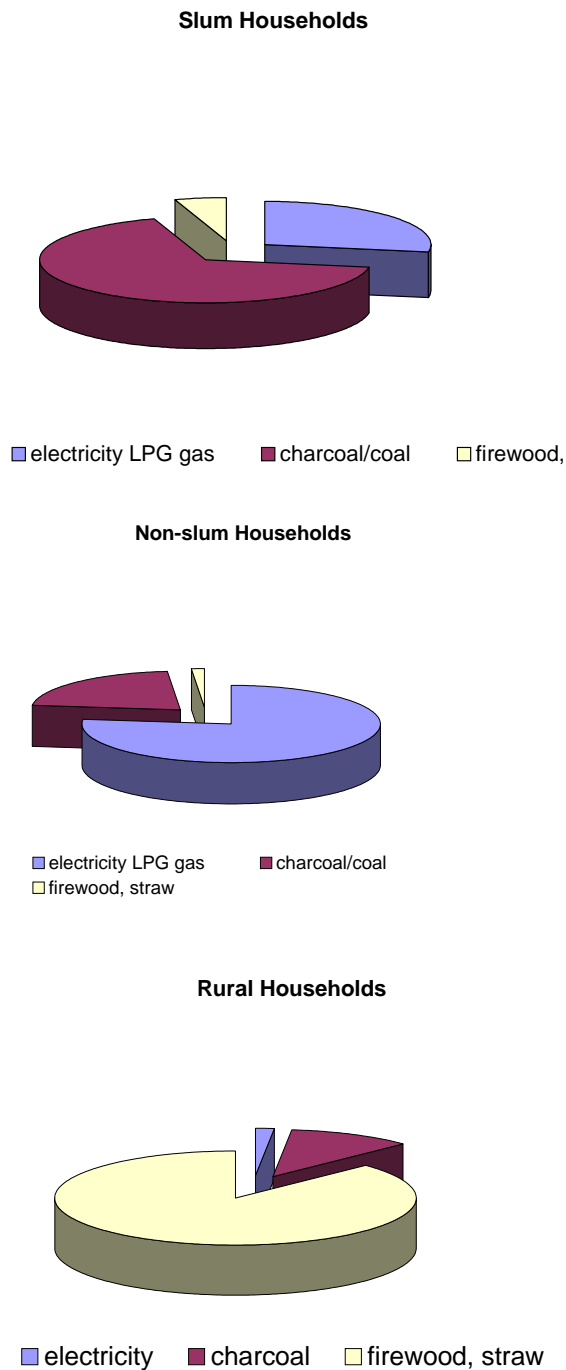
Sufficient living area

A household is considered to provide sufficient living area for the household members if three or less people share the same room.

An increase in household size has negative effects on the health of children in the household especially if the number of young children is also high. It leads to deterioration in the nutritional status of children in that household, crowding also increases the risk of children being infected with contagious disease such as pneumonia and measles. The mean household size is also slightly lower in the informal settlements compared to the rest of the population sub-groups. However the proportion of children who are younger than 5 years in a household is higher for the households in informal settlements compared to the non-slum households (Table A2).

Children are therefore exposed to unhealthy living conditions making them susceptible to infections especially those related to respiratory system.

Figure 3.1: Type of cooking fuel



Source: Zambia Demographic and Health Survey, 2001/02

Environmental management

Environment degradation and pollution

Majority of the world's population still relies on wood, animal dung and crop residues for fuels. Wood stoves create pollutants both indoors and outdoors because they generate: suspended particles that can easily be inhaled as well as gases that have harmful health effects especially relating to the respiratory system with women and children being more vulnerable. The 2002 World Health Report ranked the burden of disease from solid household fuels fourth overall for high mortality developing countries. High levels of exposure to pollutants from biomass fuels increase lung diseases such as pneumonia and lung cancer on the extreme. Other effects of reliance on biomass fuels include pollution and degradation of the environment, and that households spend a considerable amount of time in search of fuel especially firewood.

A high proportion of households in the informal settlements of Lusaka city rely on unclean fuel for cooking. Reliance on charcoal contributes to deforestation

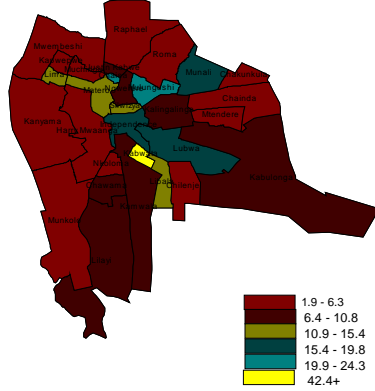
[Picture 5 & 6]

Solid waste disposal

Many cities generate more solid waste than they can dispose of. Even when municipal budgets are adequate for collection, the safe disposal of collected waste often remains a problem. Dumping and uncollected landfills are sometimes the main disposal methods in many developing countries; sanitary landfills are the norm in only a handful of cities.

Management of waste, both liquid and solid, has become a critical environmental concern particularly in the urban areas. Urban areas are often littered with garbage as a consequence.

Households with access to proper garbage disposal



Solid waste disposal in Lusaka city is very poor across almost the entire city. Poor waste disposal can impact on health for example through insects such as mosquitoes and flies breeding in stagnant water pools on waste sites and in waterways blocked or constricted with waste resulting in the spread of disease. There is therefore need for proper waste management through for example enforcing existing environmental regulations and drafting of new policies and regulations as required, enhancing community participation and through involvement of the private sector.

Chapter 4

Social development and eradication of poverty

Under-five morbidity

Under-five mortality is a powerful indicator of quality of life in cities. High child mortality is directly correlated to low environmental indicators such as the level of wastewater treatment and sewerage and sanitation facilities.

Globally about 11 million children under five years of age die annually of common preventable diseases the most leading cause being pneumonia, diarrhea, malaria, measles, anemia and malnutrition. Many of these deaths occur in countries in sub-Saharan Africa. Cough is one of the symptoms of an acute

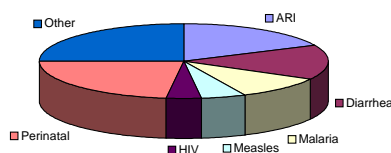
Respiratory infection (ARI) among children. ARIs cause four and a half million deaths among children every year, the overwhelming majority occurring in developing countries. Risk factors that increase the incidence and severity of respiratory infection in developing countries include large family size, lateness in the birth order, crowding, low birth weight, malnutrition, vitamin-A deficiency, lack of breast-feeding, and pollution.

A high proportion of children in the slum areas report higher morbidity compared to those in the rural areas.

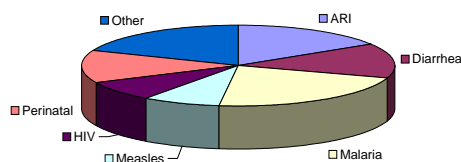
A young child can die very quickly if an illness is not recognized quickly and or no prompt action is taken immediately. Most of the childhood illnesses can be treated very easily at home or at a health facility.

Figure 4.1 Proportional mortality among under fives

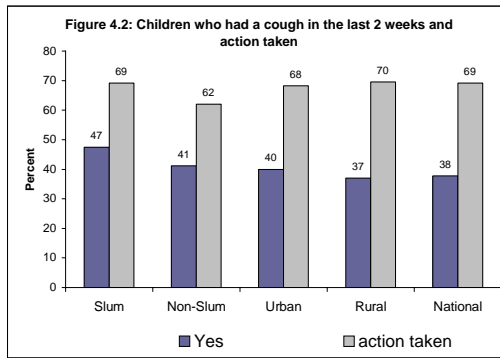
Proportional mortality among under fives globally, 2002 (EPI/WHO)



Proportional mortality among under fives in Africa, 2002 (EIP/WHO)

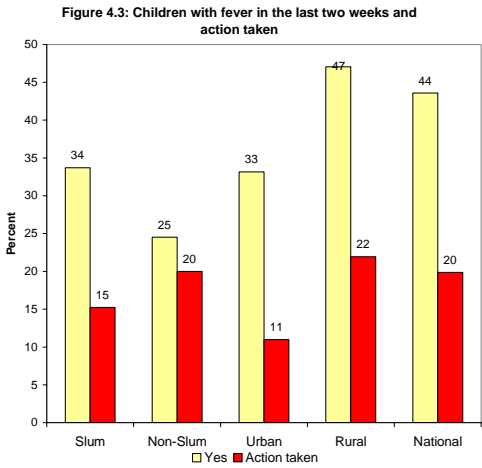


WHO, 2002

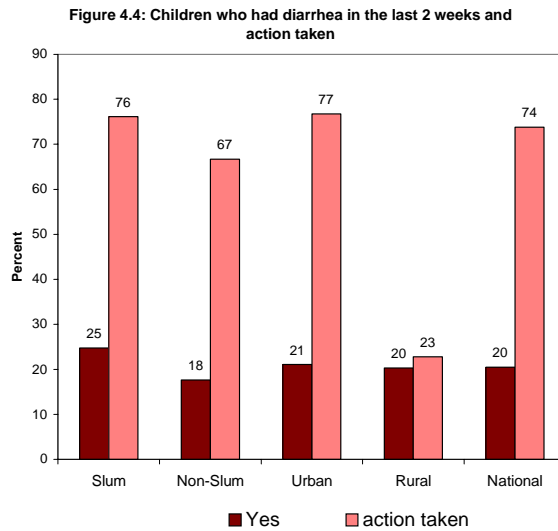


Zambia Demographic and Health Survey, 2001/02

There is need to enforce IMCI concept in the slum and to continuously educate the mothers and care givers about seeking care when the children fall ill as well as on the danger signs to watch out for.



Zambia Demographic and Health Survey, 2001/02



Zambia Demographic and Health Survey, 2001/02

Under-five mortality

Zambia has experienced a reduction in infant and child mortality over the last decade. Improvement in under-five mortality is in line with Habitat Agenda Goal for providing equal opportunity for a safe and healthy life.

What has contributed to improvement in child mortality and how can this improvement be sustained? (to be reviewed)

Improvement in access to sanitation can also greatly reduce infant mortality rate.

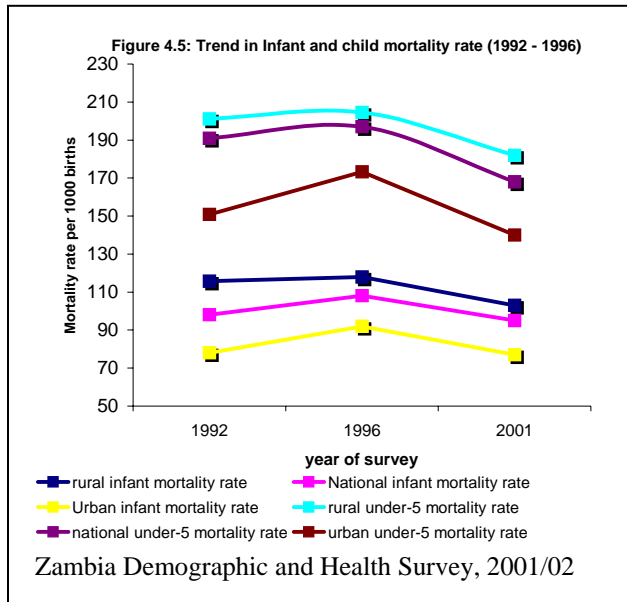


Table 4.1: Infant and child mortality rate by provinces (1996 – 2001)

Province	Infant mortality rate		Under-five mortality rate	
	1996	2001	1996	2001
Central	94.6	92	164.5	192
Copperbelt	81.9	68	175.4	134
Eastern	131.1	84	235.4	166
Luapula	157.8	154	254.2	248
Lusaka	100.3	70	174.1	137
Northern	125.3	113	200.2	187
Southern	66.2	76	148.3	148
Western	129.1	139	201.2	201

Zambia Demographic and Health Surveys, 1996 & 2001/02

Case Study

CARE International, Zambia

Infant and Child Mortality Reduction (ICMR) Project

Children living in Zambia's peri-urban areas are some of the most vulnerable to diseases in entire country as a result of rapid unplanned growth coupled with high unemployment rates and an already blistering poverty rate of 73% in the country. With an infant mortality rate of 109 deaths per 1000 and the under-age five mortality rate as 197, malaria, diarrhea and acute lower respiratory infections make up the three main causes of child deaths. Of those children that do survive, 25% are malnourished and underweight. This being the background, CARE's Infant and Child Mortality Reduction (ICMR) project aimed to address the needs of children under five years to reduce their mortality and morbidity in three Zambian cities: Lusaka, Ndola, and Kasama.

The project focused on increasing the knowledge, and practice of parents and other caretakers of children through various activities including:

- Preventative and curative interventions by training nurses in Integrated Management of Childhood Diseases (IMCI).
- Training of growth monitoring promoters to detect malnutrition and take steps to prevent it
- Gender sensitization and general training of community health promoters to give health education, selling treated bednets and chlorine
- Training of neighborhood health committees in leadership and supervisory skills
- HIV/AIDS training for community-based organizations
- Development and translation of training manuals in local languages
- Supporting and provision of clinic equipment and supplies to clinics

Key achievements of the project including the reduction in infant and child mortality rate include:

- ❖ The health personnel in the facilities are now properly checking the child thoroughly before prescribing drugs.
- ❖ The health personnel are also advising caregivers about signs to watch out for should the condition of the child worsen and the action to take including seeking care.
- ❖ The health personnel also monitor to ensure that children do not miss any scheduled immunization.

Baby Show Encourages Infant Health

During the course of the project, Baby Shows were held - where mothers and children could win great prizes - and all they had to do to qualify is to have their children immunized on time, attend monthly growth monitoring sessions, and have healthy children.

The baby show was created to encourage mothers to take their children to the clinics every month for immunization, vitamin A supplementation, weighing, health education and counseling.

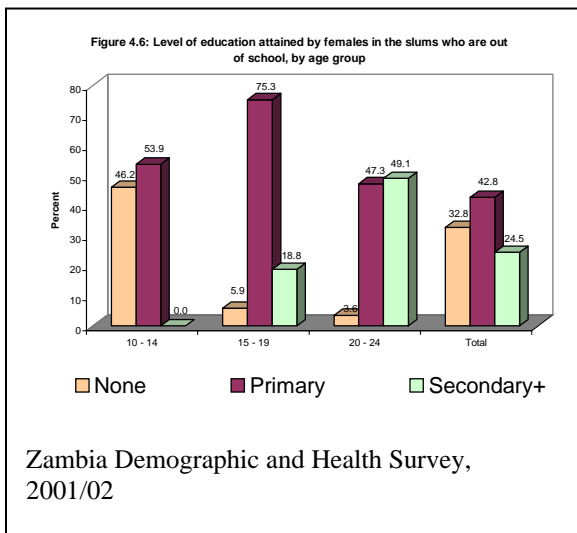
(www.careinternational.org)

School enrolment

By measuring equality of educational opportunities in terms of school enrollment, the issue of gender equity in human settlements development is also addressed. Eliminating gender disparity at all levels of education will help to increase the status and capabilities of women.

Table 4.2: Distribution of schools in Zambia by province

Province	Type of schools						Pupil/teacher ratio
	Basic schools	%	Secondary schools	%	Community schools	%	
Central	521	11.2	32	9.1	117	6.6	56.4
Copperbelt	454	9.7	78	22.1	364	20.5	40.6
Eastern	620	13.3	42	11.9	210	11.8	56.5
Luapula	375	8.0	22	6.2	91	5.1	55.7
Lusaka	312	6.7	52	14.7	193	10.8	46.8
North Western	394	8.5	26	7.4	138	7.8	50.8
Northern	807	17.3	29	8.2	288	16.2	64.3
Southern	661	14.2	43	12.2	268	15.1	63.8
Western	518	11.1	29	8.2	110	6.2	42.2
National	4662	100.0	353	100.0	1779	100.0	52.2



Education is vital in ensuring a better quality of life for all children and a better world for all people. Education also means a more productive life and better employment opportunities. Goal 2 of the Millennium Development Goals (MDG) on achieving universal primary education states that by 2015 all children both boys and girls will be able to complete a full course of primary education. Education is also one of the most important aspects of human development. Eliminating gender disparity at all levels of education will help to increase the status and capabilities of women.

Table 4.3: Adult literacy rate by province and constituencies in Lusaka city

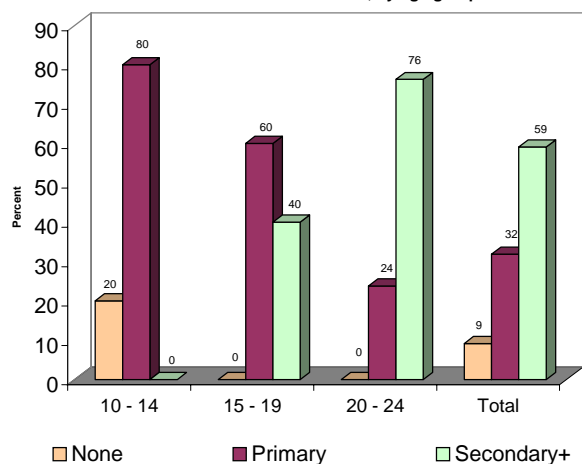
Province	Female	Male	Total
Central	60.3	77	68.5
Copperbelt	82.3	88.1	82.4
Eastern	42.6	60.2	47.6
Luapula	55.1	73.8	61.5
Lusaka	78.8	87.6	81.1
North Western	52.2	64.8	53.4
Northern	54.3	73.4	60.1
Southern	70.8	77.8	70.2
Western	63.2	68.1	59.6

Constituencies in Lusaka District

Chawama	75.7	87.2	79.8
Kabwata	91.6	95.6	92.7
Kanyama	76.1	88.1	81.1
Lusaka Central	88.0	93.4	89.7
Mandevu	75.0	87.8	79.4
Matero	84.3	91.4	86.0
Munali	84.7	90.7	86.1

Zambia 2000 Census of Population and Housing, CSO, 2003

Figure 4.7: Level of education attained by females in the non-slum areas who are out of school, by age group



Zambia Demographic and Health Survey, 2001/02

Most of the children of school going age in the informal settlements of Lusaka do not attend school. The disparity between boys and girls is very wide. More girls than boys are not in school and by age 15 a higher proportion of girls compared to the boys will have dropped out of school.

Educating girls yields social benefits for the current generation and those to come. An educated girl tends to marry later and have fewer children who will in turn be healthier and better educated.

Table 4.4: Primary school enrolment by province and constituencies in Zambia

Province	Primary school gross attendance rate			Primary school net attendance rate		
	Female	Male	Total	Female	Male	Total
Central	77.9	81.8	79.8	61.7	60.8	61.3
Copperbelt	88.5	90.9	89.7	71.7	71.4	71.6
Eastern	56.7	61.7	59.2	44.0	43.0	43.5
Luapula	69.8	77.7	73.8	53.6	55.1	54.4
Lusaka	90.3	93.3	91.8	71.2	71.4	71.3
North Western	68.0	73.9	71.0	50.9	50.7	50.8
Northern	70.0	80.1	75.1	53.1	55.5	54.3
Southern	84.2	88.6	86.4	66.3	64.7	65.5
Western	71.7	74.4	73.0	55.5	53.5	54.5

Constituencies in Lusaka City

Chawama	87.0	89.8	88.3	67.9	67.3	67.6
Kabwata	101.4	103.7	102.5	79.7	81.7	80.7
Kanyama	84.1	87.7	85.8	65.2	65.8	65.5
Lusaka Central	98.6	103.6	100.9	78.2	80.0	79.0
Mandevu	86.6	88.8	87.6	68.2	67.7	67.9
Matero	94.2	97.0	95.6	73.6	74.5	74
Munali	96.6	100.4	98.4	77.1	78.5	77.8

Zambia 2000 Census of Population and Housing, CSO, 2003

Table 4.5: Proportion still in school by sex and age group

	Slum	Non-slum	All urban	Rural
Males				
6 – 9	45.3	76.4	59.7	39.3
10 - 14	80.5	94.7	85.6	75.5
15 - 19	53.4	67.5	61.0	58.8
20 - 24	12.0	21.1	19.1	14.7
Total	49.6	64.6	59.1	51.6
Females				
6 - 9	50.7	75.9	62.0	39.9
10 - 14	86.6	86.1	86.1	71.4
15 - 19	34.8	58.3	47.4	32.2
20 - 24	4.8	18.3	10.3	2.8
Total	45.1	60.7	53.8	41.2

Zambia Demographic and Health Survey, 2001/02

Most of the young girls of school going age who are not in school are less likely to end up in any employment compared to the men where the majority are absorbed in the informal sector. Employment in the informal sector is an expression of slum conditions in Africa. There is need to improve the retention and completion rate in school among children in the informal settlements so as to improve their employability and general well being.

Access to information

Information access is very important as it increase people's knowledge and awareness that can impact on their perceptions and behavior. In Africa a lot of Information, Education and Communication (IEC) health messages are communicated via the radio and or television. Family planning and HIV/AIDS programs have relied a lot on these media to communicate messages to the general public. Being in possession of a television or radio therefore implies that one is more likely to access information that can impact on their behavior.

Ownership of a radio or television among households in Lusaka especially those residing in informal settlements, has increased over time.

Chapter 5

Gender and reproductive health

Entry into child bearing

Age at first marriage has a direct bearing on fertility behavior. Early and universal marriage is believed to contribute to high fertility levels (Davis and Blake 1954; Coale 1971). A decline in the age at first sex coupled with an increase in age at first marriage has a consequence in that the exposure period to unwanted pregnancies and STI/HIV/AIDS is increased.

Women who give birth between 15 and 19 years of age are twice as likely to die in childbirth than women who are over 20 years of age.

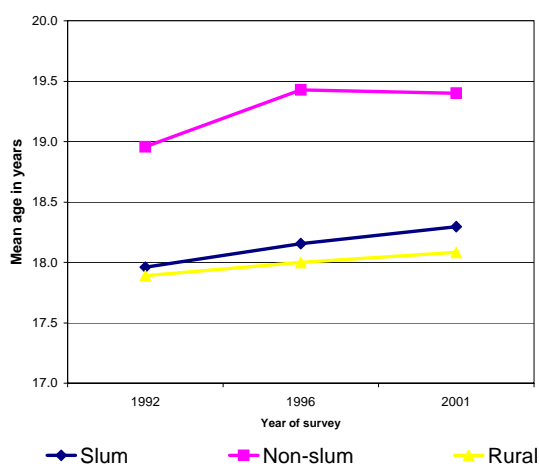
The mean age at first birth in Zambia has increased slightly (17.9 - 18.2 years). The mean age at first marriage is low by about one year among women in the slums compared to those in non-slum areas and it is closer to that of women living in rural areas.

More girls in the slum areas of Lusaka are entering into childbearing at very early ages. As shown in the previous chapter, more girls in the slum areas drop out of school before age 19. This is a consequence as well as a cause of early entry into child bearing.

Entry into marriage

There is a relationship between age at first marriage, level of education, poverty, and health in that poorer, less educated girls tend to marry earlier and tend also to have poorer health. Early marriage is also witnessed more among women in the slums. The mean age at first marriage is lower for women in the slums

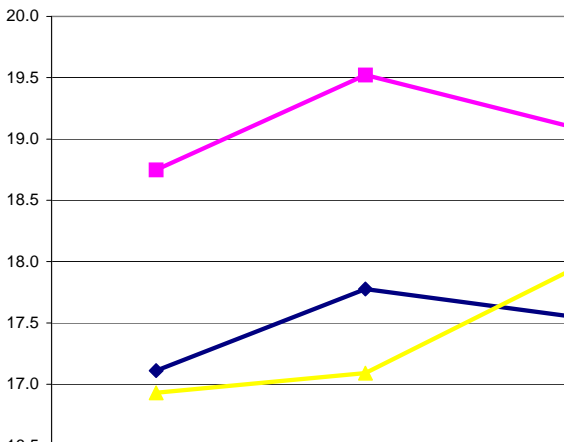
Figure 5.1: Trends in mean age at first birth



Zambia Demographic and Health Survey, 2001/02

compared to those in non-slums and by age 20, almost all (87%) of the women in slums will have entered a marital union compared to those in the non-slum areas (63%). The proportion of women who get married for the first time after age 20 is about 3 times higher for women in the non-slum areas compared to those in the slum areas.

Figure 5.2: Trends in mean age at first marriage



Early marriage usually translates into early motherhood. Women who marry at a young age are also more likely to have husbands who are much older than they are—up to 15 years older in some countries and this also increases their risk of domestic violence. This difference in age reduces the chance that the woman will be able to participate in decisions about childbearing or be able to negotiate the use of contraceptives. Early marriage is sometimes viewed as a means of economic survival. If girls are married early, then the family has one less mouth to feed, and the hope is that the girl herself will be better off. Girls who marry young tend also to drop out of school and are more likely to bear children during adolescence, thus effectively ensuring that they will not return to school or develop other work skills.

Adolescence (15 – 19 years)

Adolescence is a period where adolescents experiment with new behaviors and relationships inevitably courting some risks such as unwanted pregnancies, sexually transmitted infections including HIV/AIDS, and induced abortion among others. Teen pregnancy and early childbearing in addition to increasing the risk of death due to complications also has a host of other critical social issues, including poverty and overall child well being. Adolescent girls' health plays an important role in determining the health of future population.

Table 5.1: Total fertility rate by province

Province	1992	1996	2001
Central	6.8	6.3	6.2
Copperbelt	6.2	5.6	4.5
Eastern	6.8	7.1	6.8
Luapula	7.4	6.8	7.3
Lusaka	5.5	4.9	4.3
Northern	7.4	7.2	6.9
Southern	7.1	6.2	6.1
Western	6.0	5.5	6.4
National	7.1	6.9	6.9
National Rural	5.8	5.1	4.3
National Urban	6.5	6.1	5.9

Zambia 2000 Census of Population and Housing, CSO, 2003

The mean age at first birth and first marriage has been on the decline among adolescent women aged 15-19 years in Zambia. Becoming a parent at an early age has both social, economic and health consequences on the teenage mother and the community as a whole. Early childbearing increases the risk of complications during pregnancy and delivery, and it also increases the risk of maternal morbidity, mortality as well as miscarriages and stillbirths. Children born to young mothers are also at risk of a premature birth and low birth weight. Early marriage and child bearing among adolescents also reduces their chance of attaining a higher level of education thus affecting their chances for good employment.

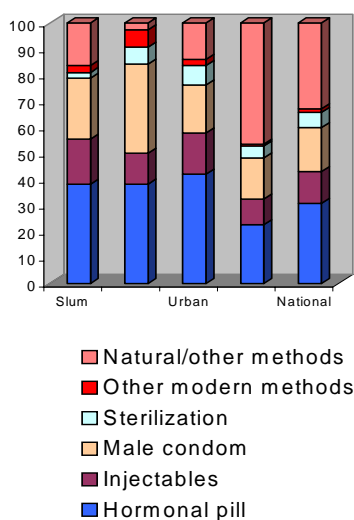
Access to reproductive health services

Family planning

Use of family planning has beneficial effects on the lives of women and children. Avoiding unintended pregnancies could prevent about one-fourth of all maternal deaths in developing countries. Use of contraception helps avoid unsafe abortions, it enables women to limit births to their healthiest childbearing years and to avoid giving birth more times than is good for their health. With spacing of pregnancies at least two years apart, women have healthier children and improve the odds of infants' survival by about 50%.

Use of family planning can also improve the choices that women make by opening the door to education, employment, and community involvement. Also, couples who have fewer children are more likely to send their daughters as well as sons to school. In addition use of family planning can also encouraging adoption of safer sexual practices.

Figure 5.2: Type of contraceptive method used



Knowledge of family planning is almost universal in Zambia where over 96% of all population sub-groups know at least one method of family planning. Knowledge of family planning is slightly higher in the slums compared to the rural areas. Individuals with adequate information about family planning methods are better able to develop a rational approach to planning their families.

Over the years, the proportion of women who have ever used family planning has been on the increase. The proportion of those who have ever used is higher among the women in the slums compared to those in the non-slum. Those who are currently using a method have also increased across all population sub-groups. Current use of family planning is also higher among women living in the slums compared to those living in the non-slum areas of Lusaka and almost twice higher than the rural areas.

Table 5.2: Trends in Knowledge and use of family planning methods

	1992			1996			2001		
	Slum	Non-slum	Rural	Slum	Non-slum	Rural	Slum	Non-slum	Rural
<i>N</i>	655	387	3,702	526	417	5,020	526	245	5,107
Knowledge of family planning methods									
Know no method	7.9	5.2	13.9	7.4	4.3	4.9	1.9	0.4	3.1
Knows at least one method	92.1	94.8	86.1	92.6	95.7	95.1	98.1	99.6	96.9
Ever use of any family planning method									
Never used/Use traditional	70.7	53.0	86.8	56.7	46.8	77.4	37.1	39.2	64.4
Used a modern methods	29.3	47.0	13.2	43.4	53.2	22.7	62.9	60.8	35.6
Current use of any family planning method									
Not using/using traditional	90.8	78.3	97.0	80.4	77.5	93.5	68.8	69.4	87.4
Using a modern method	9.2	21.7	3.0	19.6	22.5	6.5	31.2	30.6	12.6

The most popular contraceptive method in Zambia is the pill, the male condom and the injectables respectively. Use of the male condom is higher among women in non-slum areas compared to

those in the slum locations. Use of the male condom has a dual purpose and it not only protect against unwanted pregnancies but also against STIs including HIV/AIDS.

A high proportion of women in the slums are using less effective methods of family planning compared to women in the non-slum areas. Unlike only 3% of the women in the non-slums areas who are using natural methods, 16% of women who were currently using a method were using natural as well as traditional methods of family planning.

Table 5.3: Source of contraceptive methods

	Slums	Non-slums	All urban	Rural	National
Government health facilities	64.0	49.3	58.7	57.9	58.2
Private doctors/hospitals	2.4	2.7	11.4	1.4	6.6
Mission hospitals	0.0	4.0	1.9	11.1	6.4
Pharmacy/shop	31.1	38.7	21.6	10.7	16.3
Other sources	1.8	5.3	6.1	18.9	12.4

Zambia Demographic and Health Survey, 2001/02

Sources of contraceptives

Information on the source of family planning methods is very important for program manager and policy planners. The women in the informal settlements rely on the government health facilities for the supply of modern contraceptives. A large proportion of women also rely on commercial outlets (pharmacy or shop).

Reproductive rights as defined by ICPD Programme of Action, embrace certain human rights that are already recognized in national and international laws as well as in international human rights documents and other consensus documents. These rights rest on the recognition of the basic rights of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes the right to make decisions concerning

reproduction free of discrimination, coercion and violence, as expressed in human rights documents.

In order to enhance access to family planning services there is need to improve:

- **Physical** access through improvement when service delivery points are conveniently located and can be reached by a large segment of the population, including underserved populations such as those residing in slum areas.

- **Economic** access is enhanced when the costs of obtaining services are within the financial means of a significant portion of potential clients, and when the indirect costs of obtaining services (such as the time it takes to receive services) is affordable to most people.

- **Psychosocial** access can be improved by making family planning and reproductive health services socially and culturally acceptable within a society, among policymakers, community and religious leaders, and extended families. Extensive media and educational campaigns have helped lower psychosocial barriers to contraceptive use.

- **Cognitive** access is heightened when potential clients know about family planning and reproductive health care and where they can go to get services. Advertising and better informational materials, including clinic signs have helped inform clients about service delivery points.

- **Administrative** access can be improved by program managers taking stock of the administrative and medical rules and regulations governing all aspects of services. Service guidelines can be improved to reflect current scientific information on contraindications and procedures, and nurses and other health staff

can be given more authority to provide various contraceptives (Family Health International).

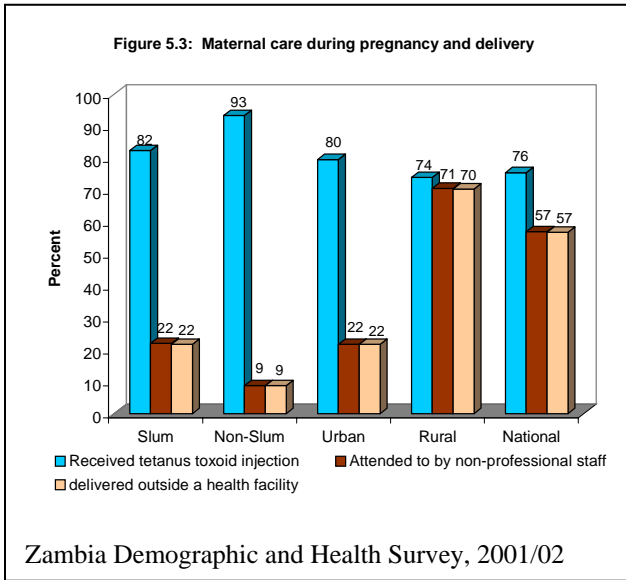
Use of antenatal services

Appropriate antenatal care is important in identifying and mitigating the risk factors in pregnancy. Failure to receive appropriate antenatal care during pregnancy can lead to undesirable pregnancy outcomes such as maternal morbidity, low birth weight or even maternal and child mortality.

Informing women about the danger signs associated with pregnancy and the actions they should take in case of complications are important elements of antenatal care services. Other services include weight monitoring, checking of blood pressure, urine and blood tests, as well as information or counseling on HIV/AIDS and breastfeeding. In most countries in Africa, antenatal care is provided at no or subsidized costs in the government health facilities. Use of antenatal care is almost universal in Zambia with very little variation among the women living in the slums compared to those in non-slum or even rural areas. Differences however emerge with regard to the person attendant during the antenatal visit. Non-professional health personnel attend to women in the slum areas while this is not the case for women in the non-slum areas.

Tetanus Toxoid Injection

Tetanus toxoid injection (TT) is a very important component of antenatal care. TT injections are given during pregnancy for prevention of neonatal tetanus, one of the principal causes of death among infants. There has been a reduction in the proportion of women in the slums who receive at least one TT injection during



pregnancy (Table *). On the other hand, women in the non-slum areas have registered an increase.

Person attendant during delivery

The type of assistance a woman receives during delivery has important health consequences for both mother and child. Being assisted by a health professional implies that proper action and care is taken in case a complication arises during delivery.

The proportion of mothers who are assisted by non-professional staff has been on the increase across all the population.

Place of pregnancy termination

The health risks faced by mothers and children during delivery can be greatly reduced if the delivery takes place in a health facility where there is proper medical attention and hygienic conditions.

The proportion of mothers delivering at home has been on the increase over time even among those not residing in informal settlements.

Chapter 6

HIV Prevalence

HIV infection leads to AIDS. Without treatment, average survival from the time of infection is about nine years. Access to treatment is uneven, and no vaccine is currently available. About half of all new cases are among people 24 years old or younger. HIV prevalence is a measure of spread of the epidemic. High HIV prevalence usually has heavy socio-economic implications in countries affected by the pandemic. The increase in mortality due to HIV/AIDS strips families of breadwinners, field labor, parents and it also produces AIDS orphans to take care of. HIV-induced declines in gross domestic product (GDP) levels in sub-Saharan Africa are severely undermining poverty alleviation efforts in developing countries.

Knowledge of HIV/AIDS has been very high and is almost universal for all the population in Zambia. The proportion that knows at least one method of prevention against HIV/AIDS has also increased as well as the proportion reporting knowledge of abstinence and use of condoms as means of protecting against HIV/AIDS.

In terms of behavior, there has been an increase also in the proportion using condoms during the last sexual intercourse among both men and women though the proportion is higher among men compared to women.

Condom use is low among women living in informal settlements. As is the case in most countries in sub-Saharan Africa, HIV prevalence is high among women and also among residents of urban areas where the prevalence is more than double what is

Table 6.1: HIV Prevalence rate by sex and age group

	Urban Lusaka	All urban areas	Rural areas	National
Total	23.5	23.1	10.2	14.3
Sex				
Male	18.1	18.9	8.5	11.7
Female	27.6	26.5	11.7	16.6
Age Groups				
15 - 19	9.5	6.6	3.5	4.5
20 - 24	20.5	15.3	8.7	11.1
25 - 29	29.4	33.0	12.6	19.5
30 - 34	26.9	38.2	14.9	23.1
35 - 39	41.2	37.4	14.3	20.3
40 - 44	23.8	28.6	13.3	17.1
45 - 59	20.8	20.6	10.1	12.8

Zambia Demographic and Health Survey, 2001/02

reported in rural areas. Women account for nearly half the 40 million people living with HIV worldwide. Despite this, women know less than men about how HIV/AIDS is transmitted and how to prevent infection, and what little they do know is often rendered useless by the discrimination and violence they face.

To tackle this problem there is need to expand access to sexual and reproductive health and educational services, increase women's ability to negotiate safer sexual relations, combat gender discrimination and violence and increase access to female-controlled prevention methods such as the female condom. As long as women and adolescent girls are unable to earn an income and exercise their rights to education, health and property, or are threatened with violence, progress on the AIDS front will pass them by (UNAIDS, UNFPA and UNIFEM, 2004).

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UNAIDS

UN-HABITAT

UNFPA

Family Health International

Measure DHS

Care international Zambia

ANNEXES

Table A1: Shelter, environmental management and access to information

	1992					1996					Slum
	Slum	Non-Slum	Urban	Rural	National	Slum	Non-Slum	Urban	Rural	National	
<i>Total</i>	548	255	2,475	3,716	6,191	431	260	2,202	5,071	7,273	
Access to water											
Unsafe water source	4.01	0	10.69	90.48	58.61	9.51	0	16.6	81.18	61.64	
Safe water source	95.99	100	89.31	9.52	41.39	90.49	100	83.4	18.82	38.36	9
Type of floor material											
Earth, mud or sand	11.5	0	14.8	85.44	57.22	5.57	0	19.05	89.2	67.97	
Durable floor	88.5	100	85.2	14.56	42.78	94.43	100	80.95	10.8	32.03	9
Type of toilet used											
Pit latrine/no facility	91.79	0	50.93	96.7	78.42	94.9	0	56.51	98.13	85.53	9
Flush/VIP latrine	8.21	100	49.07	3.3	21.58	5.1	100	43.49	1.87	14.47	
Time taken to collect water											
less than 60 minutes	8.39	0	2.9	9.52	6.88	25.99	0	7.62	14.51	12.42	
Over 60 minutes	91.61	100	97.1	90.48	93.12	74.01	100	92.38	85.49	87.58	9
Crowding in household											
Crowded	17.52	0	8.39	15.45	12.63						
Not crowded	82.48	100	91.61	84.55	87.37						
Has electricity											
No	86.0	21.6	60.7	97.4	82.8	75.4	6.2	57.8	98.6	86.2	
Yes	14.1	78.4	39.3	2.6	17.3	24.6	93.9	42.2	1.4	13.8	
Access to media (Radio or Television)											
No	91.6	47.5	83.8	99.1	93.0	68.9	25.4	62.2	98.2	87.3	
Yes	8.4	52.6	16.3	0.9	7.0	31.1	74.6	37.8	1.8	12.7	
Source of cooking fuel											
Electricity or LPG gas											
Charcoal, Kerosene or coal											

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001

Table A2: Sufficient living area

	1992					1996					2001	
	Slum	Non-slum	Urban	Rural	National	Slum	Non-slum	Urban	Rural	National	Slum	Non-slum
<i>N</i>	2,905	1,820	15,457	19,475	34,932	2,264	1,613	13,245	26,461	39,706	2,428	1,219
Sex of household members												
Male	49.7	51.5	50.0	48.6	49.2	50.6	48.5	49.5	48.8	49.0	50.2	50.2
Female	50.3	48.5	50.0	51.4	50.8	49.4	51.5	50.5	51.2	51.0	49.8	49.8
	1,444	935	7,722	9,450	17,172	1,146	782	6,557	12,904	19,461	1,219	1,219
Number of children under 5 years												
none	37.6	35.7	34.6	41.8	39.0	39.9	41.9	36.6	39.9	38.9	39.4	39.4
1 - 2	52.0	54.9	53.1	47.9	49.9	50.4	49.2	52.1	51.5	51.7	53.5	53.5
3+	10.4	9.4	12.3	10.3	11.1	9.7	8.9	11.3	8.7	9.5	7.1	7.1
Mean children under 5 years	1.09	1.07	1.11	1.19	1.05	1.03	0.98	1.07	1.13	1.04	0.99	0.99
Total number of household members												
1 - 3	29.6	16.5	21.8	34.0	29.1	32.7	22.3	23.7	31.3	29.0	29.5	29.5
4 - 5	28.5	16.5	24.1	27.9	26.4	27.2	23.1	24.2	29.1	27.6	32.4	32.4
6+	42.0	67.1	54.1	38.1	44.5	40.1	54.6	52.1	39.6	43.4	38.2	38.2
Mean household size	5.30	7.14	5.63	6.23	5.22	5.25	6.20	5.45	6.01	5.21	5.04	5.04
Age group of household members (Female)												
0 - 4	17.3	13.2	16.4	18.0	17.3	16.4	16.1	16.6	17.3	17.1	15.8	15.8
5 - 14	25.8	27.5	27.4	29.3	28.4	27.6	23.7	28.2	30.7	29.8	29.2	29.2
15 - 49	49.9	54.3	49.9	40.3	44.6	51.0	55.4	49.7	40.6	43.6	50.4	50.4
50+	6.9	5.0	6.4	12.4	9.7	5.1	4.9	5.5	11.5	9.5	4.7	4.7
Age group of household members (Male)												
<i>N</i>	1,459	883	7,719	10,017	17,736	1,118	831	6,685	13,557	20,242	1,209	1,209
0 - 4	17.5	13.1	17.0	17.1	17.0	18.0	13.0	16.8	17.4	17.2	17.9	17.9
5 - 14	29.5	32.7	30.7	29.0	29.7	26.8	26.5	28.1	29.5	29.0	28.4	28.4
15 - 49	48.1	49.2	47.4	41.3	43.9	50.6	55.7	50.1	41.0	44.0	49.6	49.6
50+	4.9	5.0	5.0	12.7	9.4	4.6	4.8	5.1	12.1	9.8	4.1	4.1

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001

Table A3: School enrollment

	1992					1996				
	Slum	Non-slum	Urban	Rural	National	Slum	Non-slum	Urban	Rural	National
Highest education level (Male)										
No education	29.1	17.9	25.0	40.2	33.4	29.2	23.5	26.7	39.1	
Primary	45.9	36.2	43.8	50.6	47.5	43.8	31.4	40.2	49.2	
Secondary	23.4	35.6	28.1	8.5	17.3	24.8	30.6	28.2	10.9	
Higher	1.7	10.4	3.1	0.7	1.8	2.2	14.5	4.9	0.8	
Highest education level (Females)										
No education	35.5	19.9	29.3	49.4	40.7	35.0	21.8	30.2	47.4	
Primary	51.2	45.3	51.4	46.4	48.6	47.8	36.8	45.5	46.9	
Secondary	12.6	29.3	17.9	3.9	10.0	16.1	32.4	21.5	5.5	
Higher	0.7	5.4	1.4	0.2	0.8	1.2	9.0	2.8	0.3	
Members 6-24 years still in school (Males)										
No	46.7	31.3	36.3	50.3	43.8	51.1	39.6	41.9	56.3	
Yes	53.4	68.7	63.7	49.8	56.2	48.9	60.5	58.1	43.7	
<i>N</i>	626	495	3,638	4,219	7,857	511	354	3,100	5,880	
Members 6-24 years still in school (Females)										
No	51.3	35.8	42.2	60.0	51.7	57.3	40.6	49.0	63.5	
Yes	48.7	64.2	57.8	40.0	48.3	42.8	59.4	51.0	36.5	

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001

Table A4: School retention

Age group	Slum			Non-slum			Urban	
	None	Primary	Secondary+	None	Primary	Secondary+	None	Primary
Females								
6 - 9	100.0	0.0	0.0	100.0	0.0	0.0		98.3
10 - 14	46.2	53.9	0.0	20.0	80.0	0.0		31.9
15 - 19	5.9	75.3	18.8	0.0	60.0	40.0		6.5
20 - 24	3.6	47.3	49.1	0.0	23.8	76.2		3.5
Total	32.8	42.8	24.5	9.1	31.8	59.1		23.1
Males								
6 - 9	93.0	7.0	0.0	100.0	0.0	0.0		96.3
10 - 14	46.2	53.9	0.0	6.3	87.5	6.3		33.1
15 - 19	15.9	69.1	15.1	3.0	56.1	40.9		7.4
20 - 24	11.0	54.8	34.2	2.5	27.9	69.6		4.2
Total	28.0	52.2	19.8	9.3	42.4	48.3		18.5

Source: Zambia Demographic and Health Survey, 2001

Table A5: Access to reproductive health services

	1992					1996				
	Slum	Non-Slum	Urban	Rural	National	Slum	Non-Slum	Urban	Rural	National
Person attendant at antenatal clinic										
No one/TBA/Others	0.9	0.6	1.7	13.5	8.4	0.3	0.0	1.1	6.6	4.7
Nurse	94.8	88.4	90.1	76.0	82.1	95.4	90.7	93.3	86.5	88.3
Doctor/Clinical officer	4.3	11.0	8.2	10.6	9.5	4.3	9.3	5.6	6.9	6.5
Received tetanus toxoid injection										
None	10.6	11.6	11.0	22.8	17.7	12.5	4.3	11.6	18.0	15.3
One or more	89.4	88.4	89.0	77.2	82.3	87.5	95.7	88.4	82.0	84.2
Person attendant during delivery										
No one/TBA/Others	20.3	5.2	20.6	74.0	50.8	21.3	8.8	23.6	72.8	56.3
Nurse	68.5	77.9	71.0	23.0	43.9	71.1	73.8	68.7	25.3	40.1
Doctor/Clinical officer	11.2	16.9	8.4	3.0	5.3	7.5	17.5	7.7	1.8	3.8
Place of delivery termination										
At home	20.6	4.7	20.6	72.2	49.7	22.0	9.3	23.8	72.6	56.0
At health facility	79.4	95.3	79.4	27.8	50.3	78.0	90.7	76.2	27.4	44.0

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001

Table A6: Entry into childbearing and marriage

	1992					1996					Slum
	Slum	Non-slum	Urban	Rural	National	Slum	Non-slum	Urban	Rural	National	
Number of children ever born											
0-2	55.7	61.0	57.8	49.1	53.3	56.1	70.0	59.2	49.6	53.2	5
3 - 5	27.3	23.3	23.3	25.3	24.3	27.4	20.4	23.8	26.5	25.5	2
6+	17.0	15.8	18.9	25.6	22.4	16.5	9.6	17.1	23.9	21.4	1
Mean children ever born	2.87	2.42	2.79	3.45	3.13	2.82	1.98	2.68	3.34	3.09	2
<i>N</i>	655	387	3358	3702	7060	526	417	3001	5020	8021	.
Age at first birth											
Less than 16 yrs	15.5	13.3	16.8	17.1	17.0	12.9	9.1	13.5	15.0	14.5	1
16 - 20	68.2	61.4	67.1	69.0	68.2	71.0	57.0	67.2	71.0	69.7	7
21+	16.3	25.3	16.2	13.8	14.9	16.2	33.8	19.3	14.1	15.9	1
Mean age at first birth	17.96	18.96	18.02	17.89	17.95	18.16	19.43	18.35	18.00	18.12	18
<i>N</i>	490	241	2322	2864	5186	389	263	2095	3901	5996	.
Age at first marriage											
Less than 16 yrs	31.4	17.9	28.4	32.6	30.8	22.9	15.1	24.8	30.1	28.3	2
16 - 20	56.8	53.8	57.5	57.0	57.2	60.1	50.2	56.7	58.2	57.7	6
21+	11.9	28.3	14.2	10.4	12.0	17.0	34.7	18.5	11.7	14.0	1
Mean age at first marriage	17.11	18.75	17.36	16.93	17.12	17.78	19.52	17.87	17.09	17.36	17
<i>N</i>	488	223	2301	2994	5295	411	251	2072	3963	6035	.
Adolescents aged 15 - 19 years											
Number of children ever born											
0	73.5	84.9	77.4	67.9	72.7	73.3	88.6	79.6	73.0	75.7	7
1	22.2	15.1	19.3	26.0	22.6	22.2	9.5	17.8	21.7	20.1	2
2+	4.3	0.0	3.3	6.1	4.7	4.4	1.9	2.6	5.2	4.2	
<i>N</i>	162	119	994	970	1964	135	105	799	1183	1982	.
Mean children ever born	0.31	0.15	0.26	0.39		0.31	0.13	0.23	0.33		0
Mean age at first birth	17.12	16.78	16.68	16.61		16.64	17.00	16.50	16.65		16
Mean age at first marriage	16.29	17.54	16.19	16.02		16.24	16.92	16.23	15.91		15

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001

Table A7: Family Planning

	1992					1996					
	Slum	Non-slum	Urban	Rural	National	Slum	Non-slum	Urban	Rural	National	
<i>N</i>	655	387	3,358	3,702	7,060	526	417	3,001			
Knowledge of family planning methods											
Know no method		7.9	5.2	6.9	13.9	10.5	7.4	4.3	3.1		
Knows at least one method		92.1	94.8	93.2	86.1	89.5	92.6	95.7	96.9		
Ever use of any family planning method											
Never used/Use traditional		70.7	53.0	68.1	86.8	77.9	56.7	46.8	56.3		
Used a modern methods		29.3	47.0	32.0	13.2	22.1	43.4	53.2	43.7		

Current use of any family planning method									
Not using/using traditional	90.8	78.3	89.2	97.0	93.3	80.4	77.5	83.3	
Using a modern method	9.2	21.7	10.8	3.0	6.7	19.6	22.5	16.7	
<i>N</i>	417	202	1,967	2,471	4,438	454	331	2,487	4
Current method used									
Hormonal pill	30.8	37.5	39.8	13.0	29.2	35.3	34.2	33.2	
Injectables	0.0	1.0	1.3	0.0	0.8	7.9	9.4	5.5	
Male condom	19.8	19.8	13.5	10.1	12.2	19.4	26.5	20.5	
Sterilization	13.2	15.6	14.4	11.4	13.2	4.3	5.1	8.4	
Other modern methods	2.2	13.6	6.7	0.3	4.2	7.2	5.1	3.0	
Natural/other methods	34.1	12.5	24.4	65.2	40.6	25.9	19.7	29.5	
Source of contraceptive methods									
Government health facilities	67.8	54.8	55.5	56.9	55.8	70.9	53.8	59.6	
Private doctors/hospitals	10.2	10.7	25.4	7.3	21.2	4.9	12.9	16.3	
Mission hospitals	0.0	2.4	1.1	25.7	6.8	0.0	2.2	1.4	
Pharmacy/shop	18.6	31.0	14.9	5.5	12.7	19.4	26.9	18.5	
Other sources	3.4	1.2	3.0	4.6	3.4	4.9	4.3	4.2	
Unmet need for family planning									
Unmet need	77.7	52.5	75.3	87.0	81.8	69.4	64.7	71.4	
Met need	22.3	47.5	24.7	13.0	18.2	30.6	35.4	28.6	

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001

Table A8: Child morbidity

	1992					1996					Slum
	Slum	Non-Slum	Urban	Rural	National	Slum	Non-Slum	Urban	Rural	National	
N	541	237	2,690	3,594	6,284	460	232	2,381	4,854	7,235	
Had fever in the last 2 weeks											
No	70.7	76.2	66.3	47.9	55.9	54.3	74.0	61.8	59.1	60.0	
Yes	29.3	23.8	33.7	52.1	44.1	45.7	26.0	38.2	40.9	40.0	
Action taken on the fever											
Action taken											
No action taken											
Had cough in the last 2 weeks											
No	56.5	61.9	55.7	52.9	54.2	47.8	58.5	52.3	59.4	57.1	
Yes	43.5	38.1	44.3	47.1	45.9	52.2	41.6	47.7	40.6	42.9	
Action taken on the cough											
Action taken	84.4	83.2	80.5	67.8	72.7	75.0	76.7	78.6	67.8	71.8	
No action taken	15.6	16.8	19.5	32.3	27.3	25.0	23.3	21.4	32.2	28.2	
Had diarrhea in the last 2 weeks											
No	77.4	82.9	80.2	75.5	77.6	67.6	75.5	76.6	76.9	76.8	
Yes	22.6	17.1	19.8	24.5	22.4	32.4	24.5	23.4	23.1	23.2	
Action taken on diarrhea											
Action taken	91.5	94.4	93.5	82.2	86.6	87.9	96.1	89.5	88.0	88.5	
No action taken	8.5	5.6	6.5	17.8	13.4	12.1	3.9	10.5	12.0	11.5	

Table A9: HIV/AIDS Knowledge and Behavior

	1996					2001		
	Slums	Non-slums	Urban	Rural	National	Slums	Non-slums	Urban
<i>Total</i>	526	417	3,001	5,020	8,021	526	245	2,551
Ever heard of AIDS								
No	0.4	0.0	0.2	0.7	0.5			0.1
Yes	99.6	100.0	99.8	99.3	99.5	100.0	100.0	99.9
<i>Total</i>	524	417	2,995	4,984	7,979	526	245	2,548
Knows way to avoid getting AIDS								
No	12.2	4.8	10.4	22.0	17.7	7.2	3.3	7.4
Yes	87.8	95.2	89.6	78.0	82.4	92.8	94.7	92.6
Way of avoiding AIDS								
Avoid multiple partners	100.0	99.8	99.5	99.8	99.7	14.9	19.1	17.5
Having safe sex	1.2	5.5	1.7	1.3	1.5			
Abstaining from sex	31.1	45.8	32.3	23.5	26.8	43.2	57.1	52.9
Using condoms during sex	49.6	61.6	49.9	28.7	36.7	63.5	73.1	61.9
Having one sexual partner	57.8	58.5	50.4	46.8	48.2	42.8	46.1	47.1
Avoid sex with prostitutes	7.1	10.3	5.0	4.6	4.8	0.6	0.8	1.4
Avoid sex with homosexuals	0.2	0.0	0.1	0.0	0.1	0.0	1.2	0.2
Avoid blood transfusion	7.3	9.1	5.0	2.2	3.3	1.5	3.7	2.4
Avoid injections	5.9	7.4	6.0	5.6	5.8	1.3	2.5	2.6
Avoid mosquito bites	0.0	0.0	0.1	0.1	0.1	0.2	0.4	0.2
From mother to child								
No	5.8	2.4	5.5	7.4	6.7	5.5	4.9	3.9
Yes	92.0	94.7	92.2	86.6	88.7	89.5	88.6	90.5
Don't know	2.3	2.9	2.3	6.0	4.7	4.9	6.5	5.6
Last intercourse used condom								
<i>Total</i>	467	332	2,542	4,526	7,068	387	153	1,749
No	89.7	79.8	87.3	94.9	92.2	81.1	72.6	83.1
Yes	10.3	20.2	12.7	5.1	7.8	18.9	27.5	16.9
Have other sexual partners except husband								
No	84.2	73.6	78.9	83.9	82.1	83.3	77.9	82.6
Yes	15.8	26.4	21.1	16.1	17.9	16.7	22.1	17.5

Source: Zambia Demographic and Health Surveys 1992, 1996 and 2001