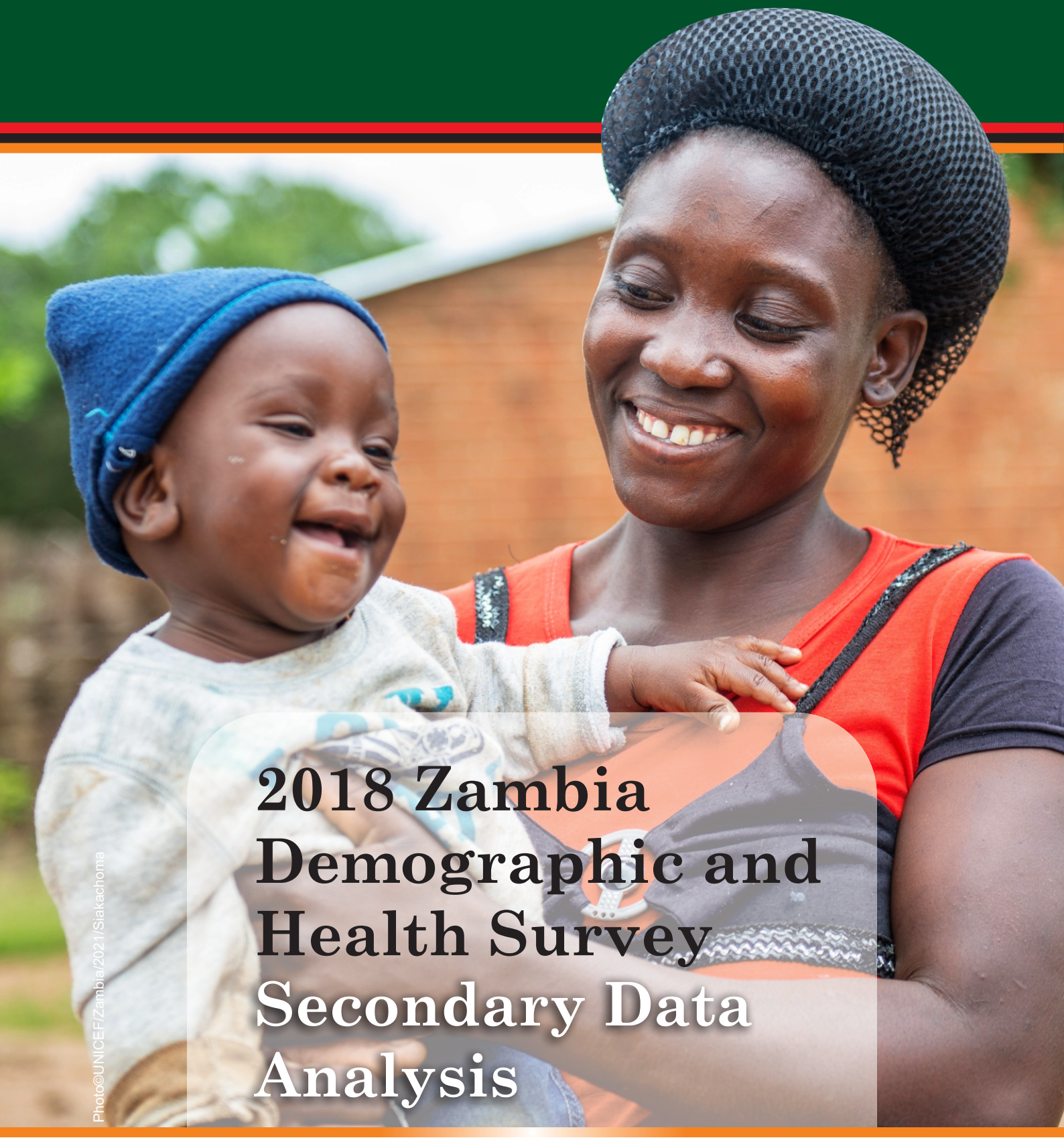

2018 Zambia Demographic and Health Survey Secondary Data Analysis

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ZAMBIA STATISTICS AGENCY

"Quality Statistics for Development"

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for every child

2018 Zambia Demographic and Health Survey

Secondary Data Analysis

Zambia Statistics Agency
Population and Demography Branch
Lusaka, Zambia

UNICEF Zambia Country Office
Lusaka, Zambia

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Contents

Table of Abbreviations

ANC	Antenatal care
ASFR	Age-specific fertility rate
CBR	Crude birth rate
CDR	Crude death rate
DHS	Demographic and Health Survey
GAR	Gross attendance rate
IMR	Infant mortality rates
ITN	Insecticide-treated net
LBW	Low birthweight
MAD	Minimum acceptable diet
MDD	Minimum dietary diversity
PRMR	Pregnancy Related Mortality Ratio
NAR	Net attendance rate
OD	Open defecation
OOSC	Out of school children
ORS	Oral rehydration salts
PNC	Postnatal care
SBA	Skilled birth attendance
SOWC	State of the World's Children
TFR	Total fertility rate
WQ	Wealth quintile
UFMR	Under-five mortality rate
WASH	Water, sanitation and hygiene
ZDHS	Zambia Demographic and Health Survey

Introduction and background

Zambia's 2018 Demographic and Health Survey (ZDHS) provides the most up-to-date and comprehensive survey of key development data in the country. The below secondary analysis of the data was carried out by UNICEF Zambia with the Zambia Statistics Agency (ZamStats) in order to generate evidence to enable effective planning of activities and the targeted focusing of attention on the most vulnerable groups.

The purpose of the data-mining exercise is to examine the ZDHS data more closely to generate additional evidence on the situation of children and women that can be used by decision makers and planners and the general public, as well as informing and guiding policies and programming initiatives of the Government of Zambia and partners.

The Zambia DHS 2018 presents excellent progress that deserves to be highlighted. The survey shows that Zambia has achieved significant advances in water, sanitation and hygiene (WASH) amid a modest fertility reduction. However, major concerns still prevail in education, child protection and equity issues, among others.

This analysis focuses on social indicators, but social outcomes and indicators do not develop in isolation. The political and economic context is also very important. Despite its lower middle-income status as a country, Zambia to all intents and purposes is a relatively poor country where just 8 per cent of the rural population had access to electricity in 2018. After a decade of strong economic growth between 2004 and 2014, the economy is now experiencing slower growth, with negative growth expected for 2020, as shown in the table below.

Table 1: Zambia Real GDP Growth Rates (2004 – 2020)

Year	Real GDP growth rate
2004–2014	7.4%
2015	3.4%
2016	3.8%
2017	3.5%
2018	3.1%
2019	1.4%
2020	-3.0%

Source: Bank of Zambia (2015 – 2020 Annual Reports)

High copper prices spurred economic growth till 2014 when an economic downturn started following a slump in commodity prices. The over-reliance on copper makes Zambia vulnerable to falling commodity prices. Traditionally, Zambia is blessed with fertile land and reliable rainfall but climate change fueling droughts and floods has impacted the country's competitiveness.

The analysis in this report starts with **equity,** providing a short introduction of wealth quintiles, followed by an analysis of how Zambia is doing in terms of equity as compared to other countries in the region. The focus of the first chapter is on the "two worlds" living in Zambia – poor people versus rich people and/or people living in the best province versus people living in the worst province.[1]

[1] The 'two worlds' conclusion is based on the analysis of the differences in outcomes between wealth quintiles which are used as indicators of the level of wealth.

The report also includes a **geographical analysis**: it highlights disparities by province and provides an analysis of the 2018 ZDHS and progress made as compared to the 2014 ZDHS. It is important to know that the distribution of wealth quintiles in 2014 and 2018 by provinces are almost identical, so it is valid to make comparisons between the wealth quintiles in 2014 and 2018.

The report also data-mines all the UNICEF thematic areas in nutrition, WASH, education, birth registration, domestic violence, mortality, youth, teenage pregnancy and child marriage, among many others.

Equity analysis

Household wealth

Defining the wealth index

The wealth index is a background characteristic used as a proxy for a household's cumulative living standard. It is based on the ownership of consumer goods, data for dwelling characteristics, WASH data and characteristics related to the socioeconomic status of households. Each household is assigned a wealth score based upon the results of the principal components analysis. Next the survey household population is ranked according to that wealth score and divided into 5 equal parts (quintiles) from lowest (poorest) 1 to highest (richest) 5.

Analysis of disparities by **household wealth** is done using the wealth index quintiles comparison; the wealth index is assumed to capture the underlying long-term wealth of a household and the distribution by lowest wealth index quintiles can be used as a **proxy for deprivation and poverty.**

The poorest wealth quintile 1 is basically the poorest rural and the richest quintile 5 is basically the richest urban; thus, the analysis by wealth quintile (WQ) is an extreme version of urban–rural differences. In Zambia, WQ1 is 33 per cent rural and 0.4 per cent urban, whereas WQ5 is 46 per cent urban and 3.2 per cent rural[2].

Wealth quintiles 1, 2 and 3 include 90 per cent of the rural population and 10 per cent of the urban population (the poorest). The poor urban population is found in WQ4. The table below gives the distribution of wealth quintiles by rural urban divide.

Table 2: Distribution of wealth quintiles by Rural/Urban Areas, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Urban	0.4	2.7	12.4	38.7	45.7
Rural	32.8	31.3	25	7.7	3.2

Equity: where does Zambia stand?

In the UNICEF publication *State of the World's Children* (SOWC) disparities are presented for all countries in the world. The data show relatively good equity in Zambia in comparison to other countries.

Selecting a couple of indicators, Zambia performs well in terms of equity. However, when looking at five key child-related indicators: birth registration, proportion of births with a skilled birth attendant, net attendance rate (NAR) for primary education, oral rehydration salts (ORS) use and prevalence of stunting, the following results emerge:

[2] This analysis is based on the standard Multi Indicator Cluster Survey methodology that compares outcomes between wealth classes. With the limitation of the use of the wealth index is noted, the results from this analysis are indicative of the actual differences between wealth classes, and are important for programme development, implementation and evaluation.

Table 3: Disparities by Household Wealth: SOWC Report, 2018

Birth registration (%)	WQ1	WQ5	Ratio
WORLD	57	84	1.7
Sub-Saharan Africa	28	68	2.4
Angola	10	55	5.5
Zimbabwe	17	68	4
Zambia	5	29	6
Skilled birth attendant	**WQ1**	**WQ5**	**Ratio**
WORLD	43	88	2.1
Sub-Saharan Africa	29	84	2.9
Angola	17	90	5.3
Zimbabwe	70	96	1.4
Zambia	45	94	2.1
NAR Primary	**WQ1**	**WQ5**	**Ratio**
WORLD	67	93	1.4
Sub-Saharan Africa	55	91	1.7
Angola	54	90	1.7
Zimbabwe	90	98	1.1
Zambia	75	97	1.3
ORS	**WQ1**	**WQ5**	**Ratio**
WORLD	35	45	1.3
Sub-Saharan Africa	29	45	1.5
Angola	31	57	1.9
Zimbabwe	37	45	1.2
Zambia	59	68	1.1
Stunting prevalence	**WQ1**	**WQ5**	**Ratio**
WORLD	43	21	2.1
Sub-Saharan Africa	46	22	2.1
Angola	47	20	2.4
Zimbabwe	33	15	2.2
Zambia	**47**	**28**	**1.7**

Analysing the above five indicators, the following can be noticed:

- Zambia is overall doing slightly better than the world average
- Zambia has high inequity in birth registration (and birth registration is at a very low level)
- For skilled birth attendance (SBA) and NAR for primary education Zambia is in line with the world figures
- For ORS, Zambia has better levels and higher equity, and equity is also higher for stunting than the rest of the world and higher than sub-Saharan Africa.

With further analysis of the inequities in Zambia, the data reveals the following:

Table 4: ***Wealth index quintile distribution for 11 key indicators***

	TOTAL	WQ1	WQ2	WQ3	WQ4	WQ5	Ratio
Unimproved water	**35**	57	42	32	13	3	19
Birth registration	**14**	4	8	14	21	32	8
NAR Secondary	**40**	11	25	37	50	67	6.1
Teenage childbearing	**29**	46	38	35	27	8	5.8
MDD	**23**	11	19	20	31	45	4.1
TFR	**4.7**	6.7	5.9	4.9	3.7	3	2.2
Female comprehensive HIV	**46**	29	35	42	52	62	2.1
Acceptance of violence	**46**	59	58	51	43	28	2.1
Stunting	**35**	40	37	33	35	24	1.7
Hospital delivery	**84**	73	80	85	92	96	1.3
All basic vaccinations	**75**	72	74	78	76	77	1.1

This table shows the wealth index quintile distribution for 11 key indicators in the 2018 ZDHS covering health, equity, education and water, sorted by the inequity ratio. Zambia shows great equity in health indicators, less equity in education related indicators and total inequity in NAR secondary, birth registration and access to improved water sources.

In countries such as Angola or Pakistan, people live in two completely different environments. In Zambia this is also the case but to a lesser extent. Nonetheless, the differences between lowest and highest wealth quintiles are enormous. While the richest 20 per cent have a reasonable standard of indicators, the poorest 20 per cent face many challenges, including living with inadequate education and nutrition. For several indicators the range is 6–10, which means the persons in the highest wealth quintile do six to ten times better than those in the lowest!

The table below shows the 11 indicators listed in the table above, by poorest quintile and richest quintiles. This graphically shows the difference between the two in Zambia.

Table 5: Comparison of Wealth index quintile 1 & 5 for 11 key indicators

Indicator	Poorest WQ1	Richest WQ5
Unimproved water	57	3
Birth registration	4	32
NAR Secondary	11	67
Teenage childbearing	46	8
Minimum dietary diversity (MDD)	11	45
Total fertility rate (TFR)	6.7	3.0
Female comprehensive HIV	29	62
Acceptance of violence	59	28
Stunting	40	24
Hospital delivery	73	96
All basic vaccinations	72	77

Box 1: How do inequities impede progress?

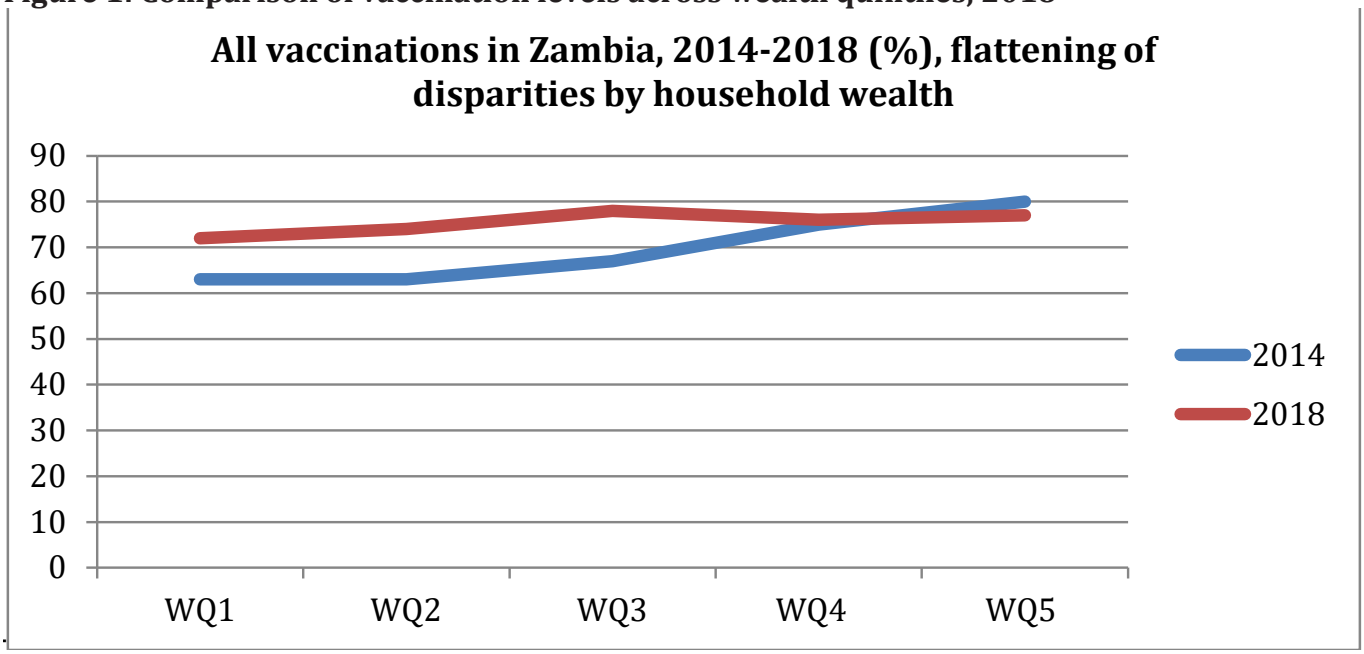
Zambia is an example of what happens when inequities are high and when fertility is slowing down only modestly. Zambia shows how large inequities impede overall progress.

Disparities in fertility rates by wealth quintiles provide important information and have implications for overall progress in key policy issues such as demographic dividends, bearing in mind that persons in the lowest quintile have less access to education and are less likely to register births. The 20 per cent poorest account for 27 per cent of annual births. As a result, overall progress in the country is subdued.

High birth rates put a big strain on countries. The high birth rates have an arithmetical effect on averages measuring development. When lots of children are born in provinces/social groups, with households that are largely poor and unhealthy and few in better-off places, the country becomes poorer and has poorer health outcomes and is less educated. Poverty is not falling fast enough to outweigh rapid population growth. The number of poor persons is holding steady.

There has, however, been some progress in achieving equity, and Zambia has several examples, such as in maternal and child health indicators, where most progress has taken place in the poorest rural quintiles resulting in something approaching equity. An example is the level of vaccinations; The graph below shows that in 2018 the level was very even across wealth quintiles.

Figure 1: Comparison of vaccination levels across wealth quintiles, 2018



The urban poor require specific attention

An important observation that can be made when comparing the 2014 ZDHS with the 2018 ZDHS is that the urban poor are often facing many hardships and deprivations. Their health outcomes (relatively) worsened the most in the 2014–2018 period. This is reflected in the under-five mortality rate (U5MR), as with stunting, with female literacy, education, and vaccinations. The urban poor have the smallest improvements and in some cases are even in retreat.

As we saw in the table above showing the 11 key indicators by poorest and richest quintiles, most indicators still follow the pattern of worst results for wealth quintile 1 (poorest) and best results for wealth quintile 5 (richest). Interesting to observe in Zambia is the **reverse equity** for HIV prevalence (it is highest among urban poor, wealth quintile IV) or possession of anti-malaria bed nets (highest among the rural poor WQ1), probably reflecting distribution bias in favour of rural malaria hotspot areas).

Geographical Analysis

Analytical Method: The Tertile Method

For this analysis, the tertile method was used to select the least advanced provinces (i.e. the provinces with the lowest level of performance) and the most advanced province (advantaged/highest level of performance).

For coverage indicators, a higher value indicates a good outcome. For output indicators (for example, stunting) a higher value is not good. To facilitate the interpretation of results, all colours have been used and graphs created in a similar way: from lowest to highest (for example, the wealth groups moving from 1 (least wealthy) to 5 (wealthiest)). The colours used are:

- Lowest performance (red)
- Average performance (yellow)
- Highest performance (green)

Since there are ten provinces in Zambia, three groups (tertile method) were selected. Comparisons over time at provincial level are often impossible because of the very large confidence intervals[3], and for that reason we also work with groups in this analysis. To iron out small differences, we use three groups:

A middle group (average) is created around the national average (plus or minus one third of range); the lowest-performing group(s) is in red and the highest-performing group(s) is highlighted in green.

Important: The 'lowest-performing' province means it is the lowest nationally. It may still record a very good value in some international comparison.

Indicators

The indicators selected because they are closely related to child poverty are as follows:

- Deprivation poverty (% in wealth quintiles 1 and 2)
- Total fertility rate
- Basic water
- Stunting
- NAR secondary education
- Delivery in health facility
- Fully vaccinated
- Birth registration
- HIV knowledge
- MDD (minimum dietary diversity)
- Early childbearing
- % Urban/Rural

The definitions of these indicators are as follows:

Deprivation (in relation to poverty): Refers to poverty that is as a result of the lack of incomes and other resources such as nutrition, health, education, water, information, housing and protection leading to vulnerability.

Total fertility rate (TFR): The average number of children a woman would have by the end of her childbearing years if she bore children at the current age-specific fertility rates. Age-specific fertility rates are calculated for the three years before the survey, based on detailed birth histories provided by women.

[3]A confidence interval refers to the range of values associated with a sample in which the true population parameter might be contained.

Basic source of drinking water: Refers to water that is from an improved source, provided either water is on the premises or roundtrip collection time is 30 minutes or less. Related indicators are:

> **Improved source of drinking water**, which includes piped water, public taps, standpipes, tube wells, boreholes, protected dug wells and springs, rainwater, water delivered via a tanker truck or a cart with a small tank, and bottled water.
>
> **Limited source of drinking water** refers to water that is from an improved source, provided round-trip collection time is more than 30 minutes.

Stunting: In children, this refers to children who are too short for their age. Measured using a height-for-age index, this is a measure of linear growth retardation and cumulative growth deficits.

Net attendance ratio (NAR) secondary education: The total number of secondary school students, expressed as a percentage of the official secondary school-age population.

Delivery in health facility: Also known as institutional deliveries – deliveries that occur in a health facility.

Fully vaccinated: Refers to the percentage of children aged 12–23 months who have received all basic vaccinations as prescribed by the Ministry of Health.

Birth registration: Child may not have a birth certificate, but his/her birth is registered with the civil authorities.

HIV knowledge: Knowing that consistent use of condoms during sexual intercourse and having just one uninfected faithful partner can reduce the chances of getting HIV, knowing that a healthy-looking person can have HIV, and rejecting the two most common local misconceptions about transmission or prevention of HIV.

MDD (minimum dietary diversity): Refers to the proportion of children age 6–23 months who received a minimum of 5 out of 8 food groups during the previous day.

Early childbearing: Also referred to as **teenage childbearing**, is the percentage of women age 15–19 who have given birth or are pregnant with their first child.

% Urban/Rural: Refers to the percentage distribution of the population or occurrence of a matter distributed to either urban or rural areas. For example, if we say 40% of teenage pregnancies are in urban areas, we imply that that 60% are in rural areas.

Performance count

To arrive at the 'performance count', the number of red, yellow and green appearances for each province per sector (group of indicators) are counted. Red is 1, yellow is 2 and green is 3. This provides a sum.

With 12 indicators involved the lowest possible value is 12 and we get 15. The highest possible figure is 36 and we get 36.

Table 6: Provincial Level Comparisons, 2018

	WQ1-2	% Urban	Childbearing	TFR	Birth Reg	Stunting	MDD
Central	42	28	31	4.8	22	33	25
Copperbelt	10	79	21	3.4	29	30	31
Eastern	59	14	40	5.3	11	34	19
Luapula	66	18	29	6	8	45	20
Lusaka	3	82	15	3.5	21	36	40
Muchinga	64	17	29	5.7	14	32	13
Northern	69	18	26	5.6	3	46	16
North-Western	57	22	36	4.9	9	32	9
Southern	35	28	43	5.5	8	29	25
Western	71	14	41	5.4	4	29	11
Total	40	40	29	**4.7**	**14**	**35**	

	NAR SEC	Water	HIV K	Delivery	AIII Vac	SUM 12	SUM Colors
Central	36	26	54	72	79	**27**	
Copperbelt	52	19	57	91	83	**36**	
Eastern	21	21	35	90	79	**20**	
Luapula	28	42	32	88	67	**16**	
Lusaka	55	2	54	91	73	**36**	
Muchinga	31	48	39	76	68	**17**	
Northern	37	60	39	72	76	**16**	
North-Western	49	35	40	88	75	**24**	
Southern	40	34	45	82	75	**22**	
Western	37	56	32	74	68	**15**	

If the provinces are now ranked based on the sum of the parts above, the following ranking is derived from the 2018 ZDHS:

Table 7: Provincial Level Rankings, 2018

Province	SUM Colour	SUM 12
Western		**15**
Luapula		**16**
Northern		**16**
Muchinga		**17**
Eastern		**20**
Southern		**22**
North Western		**24**
Central		**27**
Lusaka		**34**
Copperbelt		**36**

- Poorest/ worst = Western, Luapula, Northern, Muchinga and Eastern.
- Middle group: Southern, North Western and Central.
- Best = Copperbelt and Lusaka.
- The five provinces with the most deprivations are the predominantly rural and poorest. The relationship is strong. The two best are the most urban provinces[4].

These results corroborate the 2015 Living Conditions Monitoring Survey, which shows that poverty in Zambia is mostly a rural phenomenon, with a 76.6 per cent poverty headcount.

[4] Poor provinces are those with the highest WQ1 population

Deprivation poverty distribution

The table below presents the 2018 wealth quintiles distribution by provinces.

Table 8: Wealth quintiles distribution by province, 2018

2018 WQ5		WQ1	WQ2	WQ1-2	
15	Central	16	22	38	Poor
39	Copperbelt	2	8	10	Rich
7	Eastern	31	30	61	Very poor
8	Luapula	29	36	65	Very poor
51	Lusaka	2	3	5	Rich
5	Muchinga	38	26	64	Very poor
6	Northern	40	25	65	Very poor
12	North-Western	26	27	53	Poor
10	Southern	11	22	33	Average
8	Western	47	24	71	Very poor
	Total	20	20	40	Average

The five very poor provinces are most rural provinces with below 20 per cent urban. Western Province is poorest, followed by Luapula and Northern, then Muchinga and Eastern provinces.

Table 9: Urban population distribution by province, 2018

Province	URBAN	POP %
Central	28	10
Copperbelt	79	15
Eastern	14	12
Luapula	18	9
Lusaka	82	18
Muchinga	17	6
Northern	18	9
North Western	22	5
Southern	28	10
Western	14	7
Total	40	

But poverty is just one factor, dignified poverty exists, and cultural differences are important. Poverty is often associated with poor health outcomes for indicator value levels but not always. For example, in Zambia HIV prevalence has an inverse relationship with poverty. Throughout this document we will look at key indicators to discover the relation between deprivation poverty and outcomes for indicator values.

The table shows that 45 per cent of the urban population is in the richest quintile.

But it is also important to look at the issue the other way around, establishing 'what is the weight of the area/province in the wealth quintiles'? Looked at this way, the figures are as shown below:

Table 10: Wealth quintile distribution by rural/urban areas, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Urban	1%	5%	24%	77%	90%
Rural	99%	95%	76%	23%	10%

The table shows that the poorest quintile is 99 per cent rural, and the richest quintile is 90 per cent urban.

Table 11: Wealth quintile distribution for Lusaka and Copperbelt provinces, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Copperbelt (C)	2%	6%	10%	26%	28%
Lusaka (L)	1%	3%	7%	30%	42%
C+L	3%	8%	17%	56%	70%

With regard to WQ4[5], the above table shows that 56 per cent of population in WQ4 is from Copperbelt and Lusaka.

Table 12: Wealth quintile distribution for Western and North-Western provinces, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Western	16%	8%	5%	2%	3%
Northern	17%	11%	9%	4%	2%
W+N	33%	19%	14%	6%	5%

With regard to WQ1 (the poorest quintile), 33 per cent are from Western and Northern provinces.

Distribution data by wealth quintile for all provinces is shown in the table below.

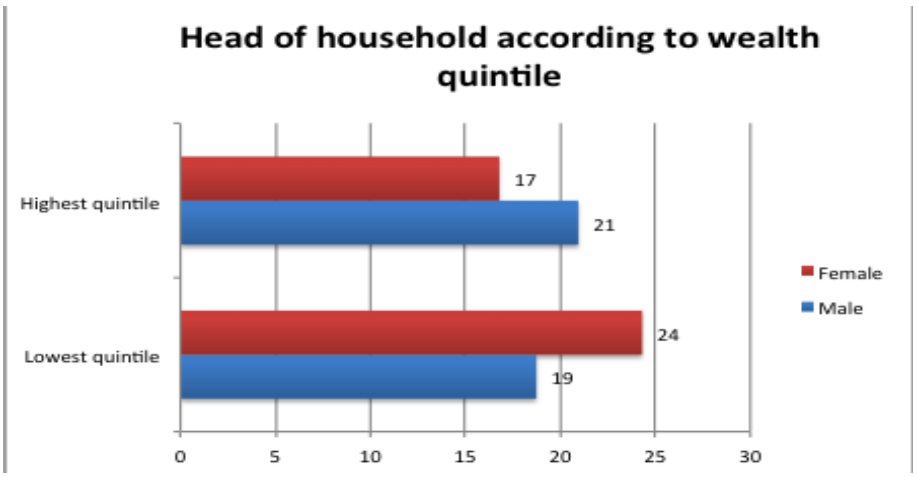
Table 13: Wealth quintile distribution for all provinces, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Central	7%	10%	13%	8%	7%
Copperbelt	2%	6%	10%	26%	28%
Eastern	20%	19%	16%	5%	4%
Luapula	12%	15%	8%	4%	3%
Lusaka	1%	3%	7%	30%	42%
Muchinga	11%	8%	6%	3%	1%
Northern	17%	11%	9%	4%	2%
NW	7%	7%	6%	4%	3%
Southern	7%	13%	19%	15%	6%
Western	16%	8%	5%	2%	3%

[5] The Urban Poor are concentrated in WQ4

Box 2: In-depth Analysis of the Wealth Quintiles

The percentage distribution of the head of household population by wealth quintiles according to sex of head of household is shown in the figure below.



Female-headed households were stable at 27 per cent in the period 2014–2018 period. In the poorest wealth index quintile, there are more female-headed households and accordingly in the richest wealth index quintile there are more male-headed households.

For larger differences it is necessary to compare the proportions by educational level of the head of household.

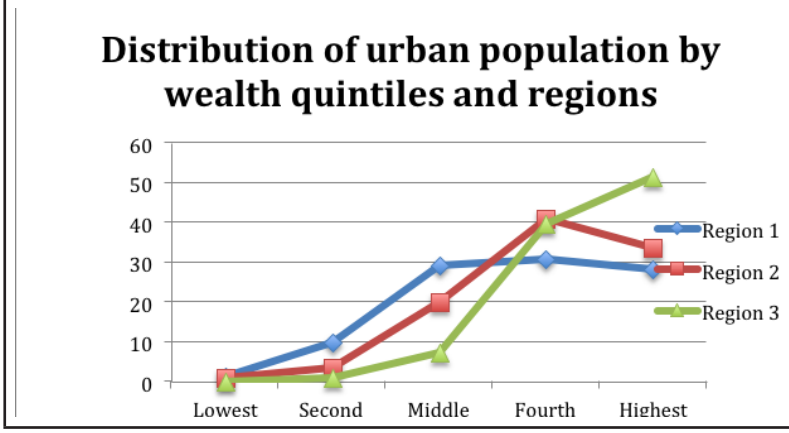
Not surprisingly heads with higher education are dominant in the highest wealth quintile.

Urban distribution of wealth

Urban distribution has important differences: urban households in region 3 (Copperbelt, Lusaka and Central) are much richer than urban households in region 1 (Luapula, Northern, Muchinga and Eastern).

Most of the urban poor (WQ4) live in Copperbelt and Lusaka but the urban *poorest* live in the urban areas of the other provinces.

In the overall hierarchy Luapula, Northern and Western have the highest proportions in poorer wealth quintiles but for urban areas Northern is poorest, followed by Luapula and Western.



General issues

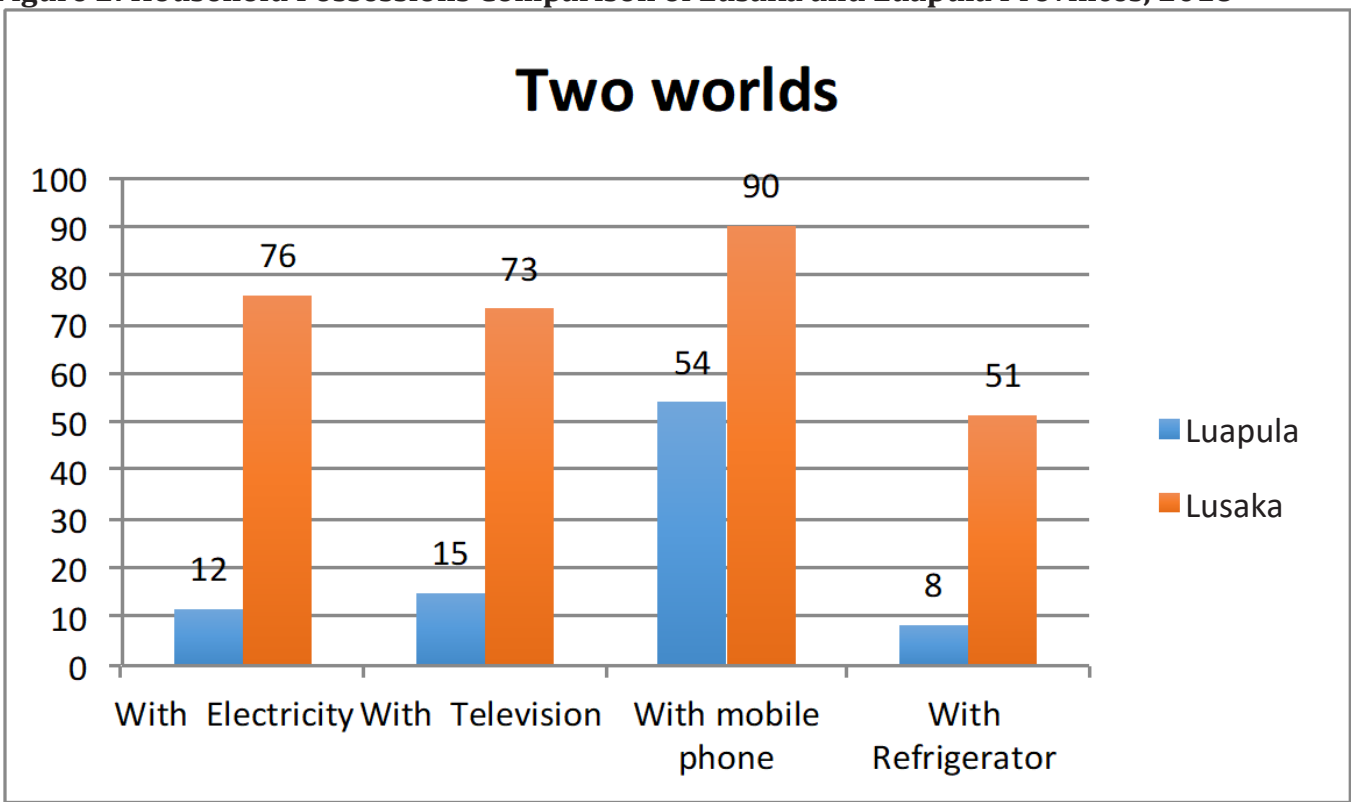
This section examines some indicators that make up part of the wealth index: access to electricity, and ownership of a television, refrigerator and/or a mobile phone.

Table 14: Household electricity access and possessions, 2014 & 2018

Household characteristics (% of households that have:)	2014	2018
Electricity	28	33
TV	37	37
Refrigerator	20	22
Mobile phone	66	74

The data show slow progress at low levels. One in three people in Zambia have access to electricity, up 5 per cent from 2014; rural availability of electricity doubled from 4 per cent to 8 per cent between 2014 and 2018.

Figure 2: Household Possessions Comparison of Lusaka and Luapula Provinces, 2018



The difference in coverage between Lusaka and Luapula is enormous, except for mobile phones.

Electricity

Using the wealth quintiles, it is possible to observe that electricity use varies widely as follows:

Table 15: Household electricity access by wealth index, 2018

	Wealth index combined				
Electricity	poorest	poorer	middle	richer	richest
YES	0.1	2	6	69	98

Looking at provincial comparisons the picture is as follows:

Table 16: Household electricity access by province, 2018

Province	With electricity (% of households)
Western	11
Northern	11
Luapula	12
Muchinga	13
Eastern	16
North Western	21
Southern	24
Central	24
Total	34
Copperbelt	62
Lusaka	76

Refrigerator

Ownership of a refrigerator is very low, ranging from 6 per cent in the poorest provinces to a high of 51 per cent in Lusaka. Refrigerator ownership by wealth quintiles is as follows:

Table 17: Household refrigerator ownership by wealth index, 2018

	wealth index combined				
Refrigerator	poorest	poorer	middle	richer	richest
	0%	0%	0%	20%	89%

The three poorest (rural) quintiles therefore had 0 per cent refrigerator ownership. WQ4 had 20 per cent but WQ5 had 89 per cent refrigerator ownership. This is a huge disparity, and refrigerator ownership is indeed the most unequally distributed indicator.

Mobile phone

Table 18: Mobile phone ownership by wealth index, 2018

	wealth index combined				
mobile phone	poorest	poorer	middle	richer	richest
	29%	64%	85%	92%	99%

Except for WQ1 (the poorest quintile) mobile phone ownership had a much lower inequity.

Television

Table 19: Household television ownership by wealth index, 2018

	wealth index combined				
Television	poorest	poorer	middle	richer	richest
	0%	3%	18%	63%	97%

Provincial composite comparisons show the following with regard to electricity, television, mobile phone and refrigerator ownership:

Table 20: Electricity access, TV, Mobile phone & Refrigerator ownership by province, 2018

Province	With Electricity	With Television	With Mobile Phone	With Refrigerator
Central	24	29	79	16
Copperbelt	62	62	88	42
Eastern	16	19	70	6
Luapula	12	15	54	8
Lusaka	76	73	90	51
Muchinga	13	17	58	6
Northern	11	17	55	6
North Western	21	27	64	16
Southern	24	28	81	12
Western	11	15	52	8
Total	34	37	74	22

Use of solid fuel

Even in urban areas, 82 per cent of people use charcoal, compared to 73 per cent in 2014. Cooking fuel is solid fuel in Zambia, as the following table shows.

Table 21: Use of solid fuels by rural urban areas, 2014 – 2018

Cooking fuel is solid fuel	2014	2018
Total	**88**	**92**
Urban	73	82
Rural	98	98

The only trend is of using more solid fuel (charcoal) in urban areas between 2014 and 2018.

Children living with parents (Orphanhood)

Fewer children live with both parents than at the time of the 2014 survey, while fewer children have one or both parents dead. The changes over the period do not vary much.

Table 22: Orphanhood in Zambia, 2014 – 2018

Orphanhood <18	2014	2018
Living with both parents	60	56
One or both parents dead	11	10

Population dynamics

Due to the decline in fertility coupled with lower mortality, the proportion of children below the age of 18 is marginally falling from 56 percent in 2014 to 54 percent in 2018. However, as the table below shows, at 54 per cent, this is still a very high number in relation to the total population.

Table 23: Population Distribution by Age, 2014 – 2018

Population Age Group	2014	2018
<5	17.2	16.1
5–9 years	17.3	16.5
10–14 years	15.5	15.7
15–19 years	9.5	10.1
<15	50	48.3
<18	**56**	**54**
Adolescents	25	25.8
>65	3	3

The crude birth rate (CBR) in Zambia is 35.3 per 1,000 population. Urban areas have a lower CBR (30.9) than rural areas (38.4). In 2013–2014 the CBR was 37.2 per 1,000 population.

Table 24: Evolution of Birth Rates by rural urban areas, 2007 – 2018

	Fertility				Decline
		DHS 2007	DHs 2014	DHS 18	2014 - 2018
Total	TFR	6.2	5.3	4.7	11%
	GFR	214	184	163	11%
	CBR	43.6	37.2	35.3	5%
Urban	TFR	4.3	3.7	3.4	8%
	GFR	151	135	120	11%
	CBR	36.3	32.2	30.9	4%
Rural	TFR	7.5	6.6	5.8	12%
	GFR	259	226	201	11%
	CBR	47.5	40.3	38.4	5%

The decline in CBR is smaller than the decline in the Total Fertility Rate (TFR) (see next) as cohorts of women of fertile age increase. The CBR found in the DHS (35.3) is significantly lower than the estimate of the UN Population Division (40) or the Population Reference Bureau (43). The crude death rate (CDR) in Zambia is 9, according to the UN Population Division.

Population growth

The crude birth rate is an important indicator because it sets population growth. Population growth is ((CBR – CDR)/10), crude birth rate minus crude death rate divided by 10 (to get the %).

With the CBR at 35.3 and the CDR at 9, the population growth is 2.6 per cent ((CBR – CDR)/10= 35.3-9= 26.3/10 = **2.6 per cent**. This is lower than the 3 per cent estimate according to the UN Population Division.

The population growth numbers have important consequences: with a growth rate of 3 per cent the population doubling time is 23 years and with a growth of 2.6 per cent doubling time is 26.5 years. Therefore, with a 3 per cent yearly growth the population will grow from 16 to 44 million in 2050, and with a 2.6 per cent yearly growth the population will increase to 39 million by 2050.

Among the poorest groups, the CBR is 44 and population growth is 3.3 per cent, so doubling time is just 21 years. The poorest population will grow 27 times in 100 years.

When analysing the numbers for 2050, comparing the rich and the poor produces the following figures:

Table 25: Population growth rates estimates by wealth category

	Population 2015	Growth rate	Population 2050	
Zambia	16	2.60%	39.3	
Richest 20%	3.2	1.90%	6.2	% of total
Poorest 20%	3.2	3.3%	9.6	24%

Observing the above, the following important implications should be noted:

- The poorest 20 per cent will be the poorest 25 per cent in 2050
- The richest 20 per cent will be the richest 15.7 per cent in 2050
- The poorest 20 per cent will triple in population between 2015 and 2050
- The richest population will almost double

Zambia will need **2.6 per cent or more** economic growth to avoid recording lower per capita incomes over time (i.e., to avoid people getting poorer over time).

TFR declining, which is very positive but CBR is not going down as quickly as the cohorts of women of fertile age are increasing rapidly. With mortality falling (CDR) we see that despite the significant drop in total fertility the population growth (CBR – CDR) is hardly going down; it is hovering at 2.6 per cent, close to 3 per cent, meaning that the population will double every 26.5 years (15 times in 100 years).

Among the poorest, the CBR is 43 and population growth is 3.2 per cent, with doubling time just 21.5 years. The poorest 20 per cent of the population will grow 30 times in 100 years, and as highlighted above, the poorest 20 per cent will be the poorest 25 per cent in 2050.

The **fertility** data show the decline in fertility reduction; what is worrisome is that youth fertility is basically stagnant. In addition, fertility is so high among the rural poor (6.7) that future progress in social indicators will be difficult to achieve, because of the rapid growth in the unattended population[6]. This is something that should be highlighted as well.

Fertility: TFR

The total fertility rate (TFR) in Zambia is 4.7 children per woman. Urban areas have a much lower TFR (3.4) than rural areas (5.8).

TFR in Zambia is decreasing, from 6.1–6.2 in the 1996–2007 period to 5.3 in 2014, and the TFR in 2018 was 4.7 (on average each woman will give birth to five children).

[6]This refers to the population receiving little to no services, mostly the poor in rural areas

Table 26: Evolution of Total Fertility Rate by rural/urban areas, 2007 - 2018

	Fertility				Decline
		DHS 2007	DHS 2014	DHS 18	2014–2018
Total	**TFR**	6.2	5.3	4.7	11%
Urban	**TFR**	4.3	3.7	3.4	8%
Rural	**TFR**	7.5	6.6	5.8	12%

There are also some extreme TFR results, based on rural–urban differences, provincial comparisons, and by wealth quintile:

Table 27: Total Fertility Rates Extremes, 2018

Region	TFR
Rural	5.8
Luapula	6.0

This table shows TFR by wealth index quintiles and progress in the 2014–2018 period:

Table 28: Total Fertility Rates by wealth quintiles, 2018

	TFR	Progress
WQ1	6.7	6%
WQ2	5.9	16%
WQ3	4.9	18%
WQ4	3.7	12%
WQ5	3	0%

TFR among the richest 20% is just 3 and is even lower for those of this group with higher education (2.4). **Higher education is therefore an effective family planning method.** The table also shows a very interesting and important finding: the poor (WQ1) and rich (WQ5) are making little or no progress with regard to fertility decline.

Regarding provincial comparisons, Western, Eastern and Luapula provinces have a high TFR and have made limited progress. Some positive news in the DHS report (Chapter 6: Fertility preferences) is that although ideal family size is 4.6 children the wanted TFR is 4, thus there is some potential for a future decline.

This table shows TFR in 2018 and progress in 2014–2018 period by province.

Table 29: Progress in Total Fertility Rates by province, 2014 - 2018

Province	TFR	Progress
Central	4.8	19%
Copperbelt	3.4	15%
Eastern	5.3	9%
Luapula	6	6%
Lusaka	3.5	5%
Muchinga	5.7	10%
Northern	5.6	15%
North Western	4.9	21%
Southern	5.5	11%
Western	5.4	4%

Age-specific fertility rates (ASFR)

The sum of age-specific fertility rates leads to the composition of the total fertility rate (TFR).

This table shows the age-specific fertility rates comparison between 2014 and 2018.

Table 30: Age Specific Fertility Rates by province, 2014 - 2018

Age group	DHS 14	DHS 18	Decline 2014–2018
15–19	141	135	6
20–24	239	203	36
25–29	232	199	33
30–34	203	187	16
35–39	152	138	14
40–44	71	63	8
45–49	14	12	2
TFR	**5.3**	**4.7**	

The table shows that the age group with highest fertility (and highest drop in fertility) is women aged 20-24 years. In the age group 40–44 one in sixteen women will still give birth in a year. Fertility is very high in the age group 20–35, thus implying little use of family planning.

Teenage fertility

Teenage fertility is high in Zambia with one in seven adolescent girls giving birth per year, and rural fertility is double the urban fertility rate.

Table 31: Teenage fertility 2014 – 2018 DHS Comparisons

	DHS 2007	DHS 12–13	DHS 18
Teenage fertility	146	141	135

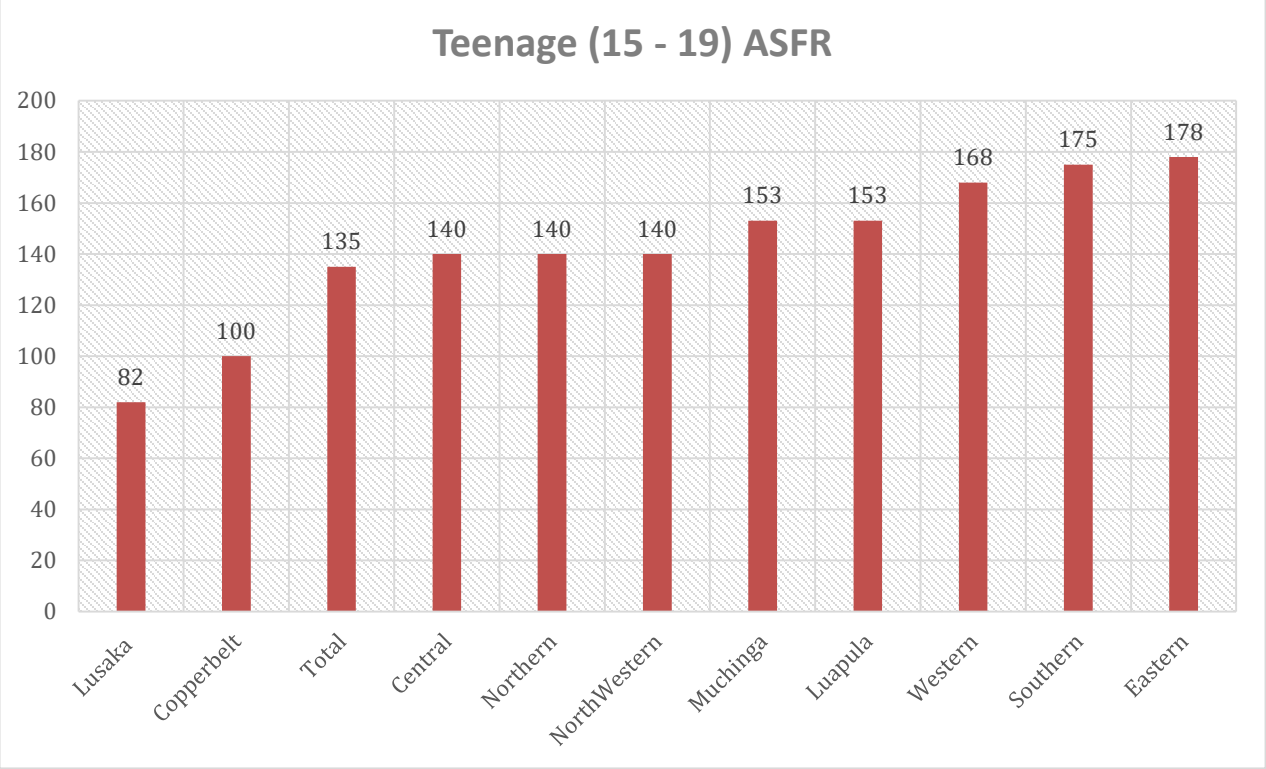
The 2018 survey shows the following rural–urban breakdown for teenage fertility rates.

Table 32: Teenage fertility by rural/urban areas, 2018

Residence	Teenage Fertility Rate
Urban	**88**
Rural	**174**
Total	**135**

Provincial comparisons in terms of the age specific fertility rate for 15–19-year-olds are shown below.

Figure 3: Specific Fertility Rates (ASFR), 2018



The table shows that the poorest 20 per cent have age specific fertility rate more **than five times** higher than the richest 20 per cent. Teenage fertility by wealth index is as follows:

Table 33: Age Specific Fertility Rate by Wealth Status, 2018

	Wealth index combined				
	Poorest	Poorer	Middle	Richer	Richest
ASFR	212	184	158	115	40

Teenage pregnancy and childbearing

Teenage pregnancy and childbearing results from the ZDHS 2018 provide cause for concern, because the situation is static and is not improving.

Teenage childbearing (ages 15 -19) by wealth quintiles in 2014 and 2018 are as follows:

Table 34: Teenage Childbearing by Wealth Index, 2014 and 2018

	DHS 13–14	DHS 18
Total	29	29
WQ1	45	46
WQ2	39	38
WQ3	36	35
WQ4	28	27
WQ5	10	8
Ratio	4.5	5.8

The geographical analysis also shows a very stable picture; there are some survey fluctuations present but the pattern is similar: Eastern, Western, and Southern provinces have the highest teenage childbearing rates.

Table 35: Teenage Childbearing by Province, 2018

Teenage childbearing	DHS 18
Central	**31**
Copperbelt	**21**
Eastern	**40**
Luapula	**29**
Lusaka	**15**
Muchinga	**29**
Northern	**26**
North Western	**36**
Southern	**43**
Western	**41**
Total	**29**

Table 36: Teenage Childbearing and Total Fertility Rate by Province, 2018

	Childbearing rates	TFR
Central	**31**	**4.8**
Copperbelt	**21**	**3.4**
Eastern	**40**	**5.3**
Luapula	**29**	**6**
Lusaka	**15**	**3.5**
Muchinga	**29**	**5.7**
Northern	**26**	**5.6**
North Western	**36**	**4.9**
Southern	**43**	**5.5**
Western	**41**	**5.4**
Total	**29**	**4.7**

Comparing teenage childbearing and TFR we see that:

- Copperbelt and Lusaka provinces have the lowest Child bearing and Total Fertility Rates;
- Central Province has average rates for both indicators;
- North Western Province has high teenage fertility but average TFR;
- Western, Southern and Eastern provinces have high childbearing and high TFR; and
- Muchinga, Northern and Luapula provinces have average teenage childbearing rates and the highest TFR (i.e. childbearing starts later but population growth is steady).

Child mothers and Child brides

The 2018 DHS results as compared to 2014 show how stable the number of child mothers is in Zambia; one in three women will give birth before age 18. This is despite the small drop in child marriage (over time comparing 2018 with 2014 as well as comparing results of older women with younger women). Early childbearing is slightly higher than child marriage.

Table 37: Child brides and child marriages comparisons, 2014–2018

Marriage 2018	<15	<18	Child mother	<15	<18
Women 20–24	5	29	Women 20–24	3	31
Women 25–49	9	39	Women 20–49	4	33

Marriage 2014	<15	<18	Child mother	<15	<18
Women 20–24	6	31	Women 20–24	3	31
Women 25–49	10	45	Women 20–49	4	34

Note, however, that early marriage is a cultural issue, with all rural areas showing the same outcomes: 50 per cent of women are married close to 18 years; in Eastern (17.8), Northern (17.8) and in Muchinga 50 per cent marry before age 18 (as median age is below 18).

Early Marriage

In the DHS 2018 the focus is on 'age at first marriage' and 'age at first birth', but we now present our estimates of indicators: Child Marriage (<18) and Child Mothers (birth <18), based upon women 20–29 years of age[7].

The following table shows that the number of 'child mothers' is totally stable over time while 'child brides' is showing a declining trend[8]. Both indicators are a result of rural culture, norms and practices because the three lowest wealth quintiles have similar values. In Eastern and Northern provinces more than half the girls married before age 18.

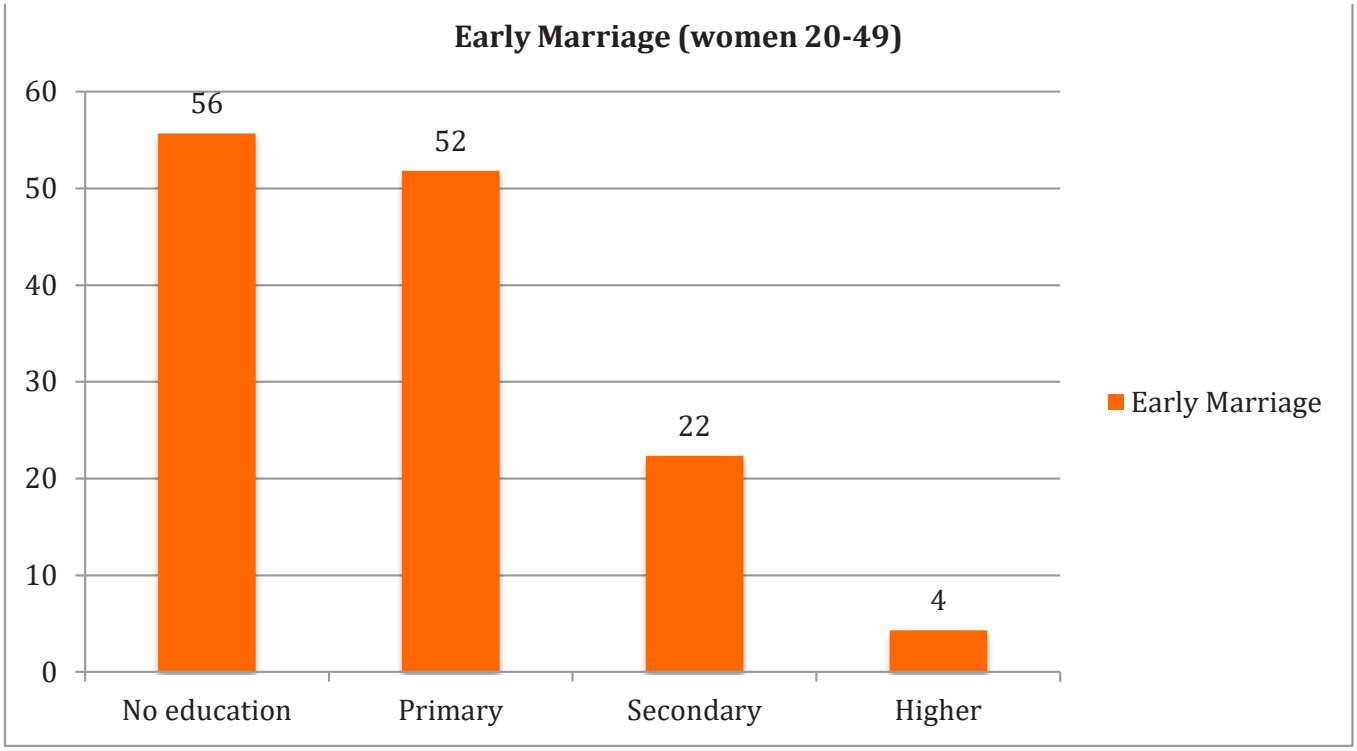
[7] Child marriage refers to women who reported to have been married before age 18
[8] Trend by comparing by age groups

Table 38: Child marriage comparisons, 2018

Age group	Child Marriage Brides	Child Birth Mothers
20–24	**31**	32
25–29	**34**	33
30–34	**37**	32
35–39	**45**	35
40–44	**41**	33
45–49	**46**	34
Total	**37**	**33**
Residence		
urban	**28**	28
rural	**46**	38
Total	**37**	33
Province		
Central	41	38
Copperbelt	28	25
Eastern	51	39
Luapula	42	33
Lusaka	29	26
Muchinga	47	37
Northern	51	38
North Western	29	32
Southern	43	41
Western	25	35
Total	37	33
Education status		
No education	**56**	45
Primary	**52**	42
Secondary	**22**	25
Higher	**4**	8
Total	37	33
Wealth Status		
Poorest	48%	39%
Poorer	47%	40%
Middle	46%	41%
Richer	36%	32%
Richest	19%	20%

The analysis shows that a girl with higher education has thirteen times less probability of being married as a girl with just primary education.

Figure 4: Early Marriage by education level, 2018



Early marriage is highest in Eastern and Northern provinces. The table below also presents data for ages 15 and 16.

Table 39: Early marriage by residence and provinces comparisons, 2018

	Very Early Marriage
Residence	**(<15)**
Urban	**6**
Rural	**11**
Total	**8**
Province	
Central	**11**
Copperbelt	**5**
Eastern	**12**
Luapula	**13**
Lusaka	**6**
Muchinga	**14**
Northern	**13**
North Western	**5**
Southern	**6**
Western	**3**
Total	**8**
Education status	
No education	**18**
Primary	**12**
Secondary	**3**
Higher	**1**
Total	**8**

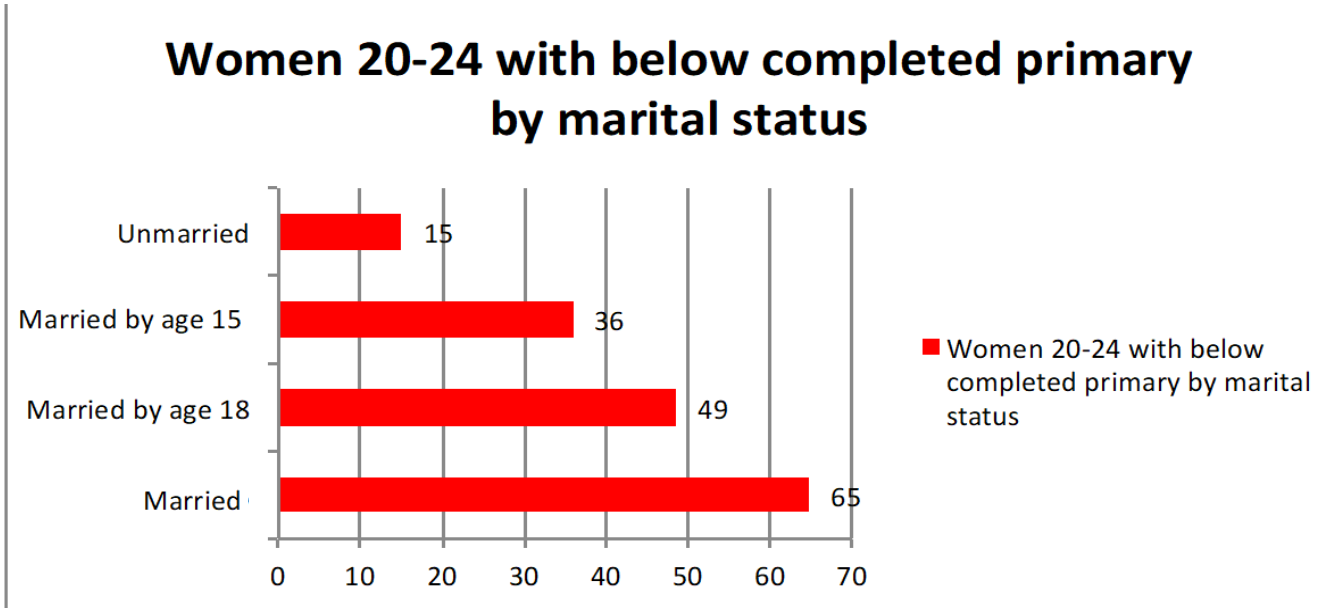
Poorest	**12**
Poorer	**11**
Middle	**10**
Richer	**7**
Richest	**4**

Girls with just primary education are four times more likely to marry before age 15 than girls with secondary education. Very early marriage is highest in Muchinga, Luapula, Northern and Eastern provinces.

Relation between education and early marriage

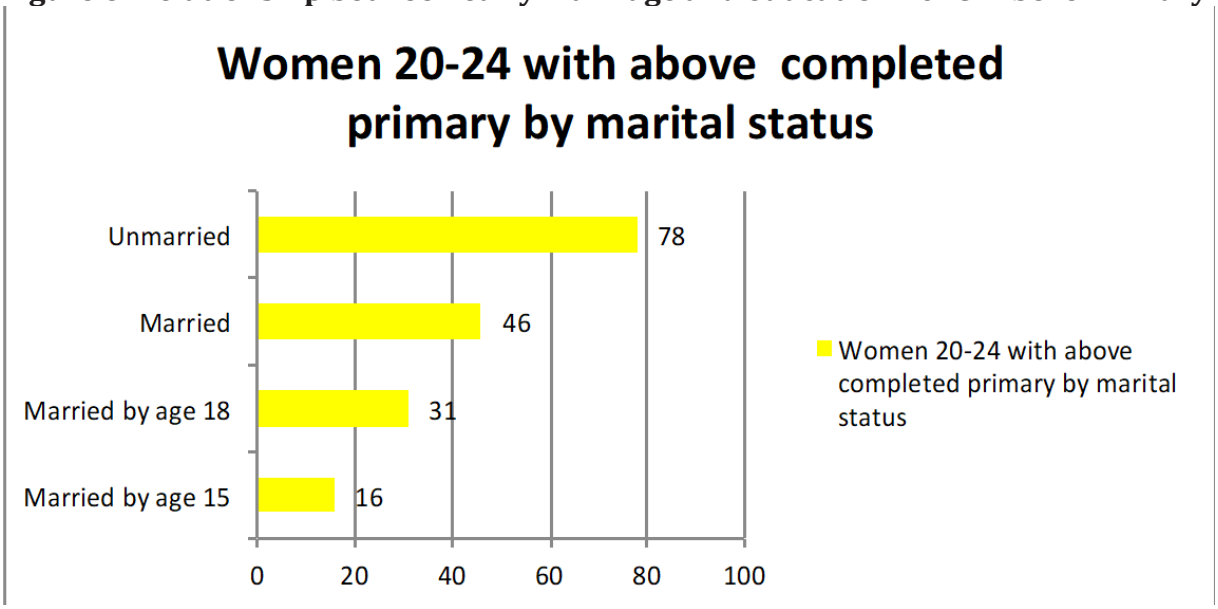
The effect of delaying marriage on educational level is very clear, as shown by the following graphs:

Figure 5: Relationship between early marriage and education, 2018: Below Primary Education



The picture for women in the same age group with above completed primary by marital status is a mirror image of the graph above:

Figure 6: Relationship between early marriage and education 2018: Above Primary Education



More information on young mothers

Based on the ZDHS, young girls are slightly better educated and have a 7 per cent better literacy rate than average for women 15–49. In the section on maternal health we saw that the ASFR for mothers of 15–19 is 135 and fertility is highest in the age group 20–24 at 203.

In the DHS 2018 sample, 20 per cent of births were to women aged 15–19, with an important negative impact on infant mortality rates. Notably, 99 per cent of girls aged 15–19 do not have health insurance.

When we compare mothers under the age of 20 with all mothers we see some interesting results below.

Table 40: Young mothers comparison, 2014 – 2018

Indicator	Women 15–19 (2018)	Women 15–49 (2014)	Comment
Use of mass media	46	46	Same
ANC use	97	97	Same
Urine sample taken	63	65	
Home delivery	11	15	Better
Delivered by SBA	84	80	Better
Skin to skin contact	56	55	
No postnatal check newborn	28	28	
Content PNC good	69	66	
Low birthweight (LBW)	12	9	

Not a single indicator has a statistically significant difference, although we do know that LBW and IMR are higher among young mothers, and this is one of the reasons UNICEF is advocating against child brides and child mothers.

Birth registration

Birth registration is amazingly low at 14 per cent according to DHS 2018 (one in seven children registered). This is up from 11 per cent in the DHS 2014. Urban birth registration improved more than rural, with urban areas recording that one in four children had their birth registered with the civil authorities.

Table 41: Birth registration by rural/urban areas, 2014 – 2018

	Birth reg. 2014 (%)	Birth reg. 2018 (%)	Increase
TOTAL	11	14	3
URBAN	20	25	5
RURAL	7	8	1

The 2018 data by wealth give an incredible ratio of 8.

Table 42: Birth registration by wealth quintile, 2018

WQ1	WQ2	WQ3	WQ4	WQ5	Ratio
4	8	14	21	32	8

In the richest quintile one in three births is registered, in the poorest quintile one in 25. Most progress took place in wealth quintile 4.

Table 43: Evolution of Birth registration by wealth quintile, 2014 – 2018

WQ	Birth reg. 2014(%)	Birth reg. 2018(%)	Increase
WQ1	5	4	-1
WQ2	5	8	3
WQ3	10	14	4
WQ4	14	21	7
WQ5	29	32	3
Ratio	5.8	8	2.2

When it comes to birth registration by province, Northern (3%) and Western (4%) provinces were the poor performers. In Northern and Western provinces birth registration is as low as in the poorest wealth quintile.

Table 44: Birth Registration by Province, 2014 and 2018

	Birth reg. 2014 (%)	Birth reg. 2018 (%)	Increase
Central	5	22	17
Copperbelt	24	29	5
Eastern	13	11	-2
Luapula	6	8	2
Lusaka	21	21	0
Muchinga	4	14	10
Northern	2	3	1
North Western	5	9	4
Southern	12	8	-4
Western	3	4	1

The best-performing provinces are stagnant Lusaka and improving Copperbelt. The highest increase in birth registration took place in Central Province.

How does the birth registration indicator compare with deprivation poverty or our geographical analysis? Western, Northern and Luapula provinces are always the poorest and most deprived according to the secondary analysis results.

Under-5 mortality rate (U5MR)

Important under-five mortality observations from the analysis include:

- Despite the limited fertility reduction, **under-five mortality is declining rapidly**.
- The U5MR declined from 75 deaths per 1,000 live births to 61 deaths per 1,000 live births in the 2014–2018 period, continuing the trend of marked decline since 1996 (when U5MR was 197).
- The mortality reduction is evidence based as it is supported by important progress in maternal and child health indicators, in nutrition and in WASH.

It is important to note that **neonatal mortality is not falling**; mortality is only dropping among children aged 1–4 years. The neonatal mortality showed an *increase from 24 to 27 per 1,000 live births* between 2014 and 2018.

By household wealth, the results for the U5MR are also very interesting, if not surprising: a huge decline was reported in WQ1, 2 and 3 (rural areas). However, there was an increase in WQ4, and WQ5 was stable. Thus, **the urban poor (WQ4) have the highest under-five mortality in Zambia**.

Table 45: Under 5 Mortality by Wealth Quintile, 2018

	U5MR	% Change 2014-18
WQ1	67	-33%
WQ2	67	-21%
WQ3	53	-33%
WQ4	76	4%
WQ5	57	-2%

Under-five mortality among the poorest (WQ1) is almost the same as among the rich (WQ5).

In addition, some further useful analysis reveals:

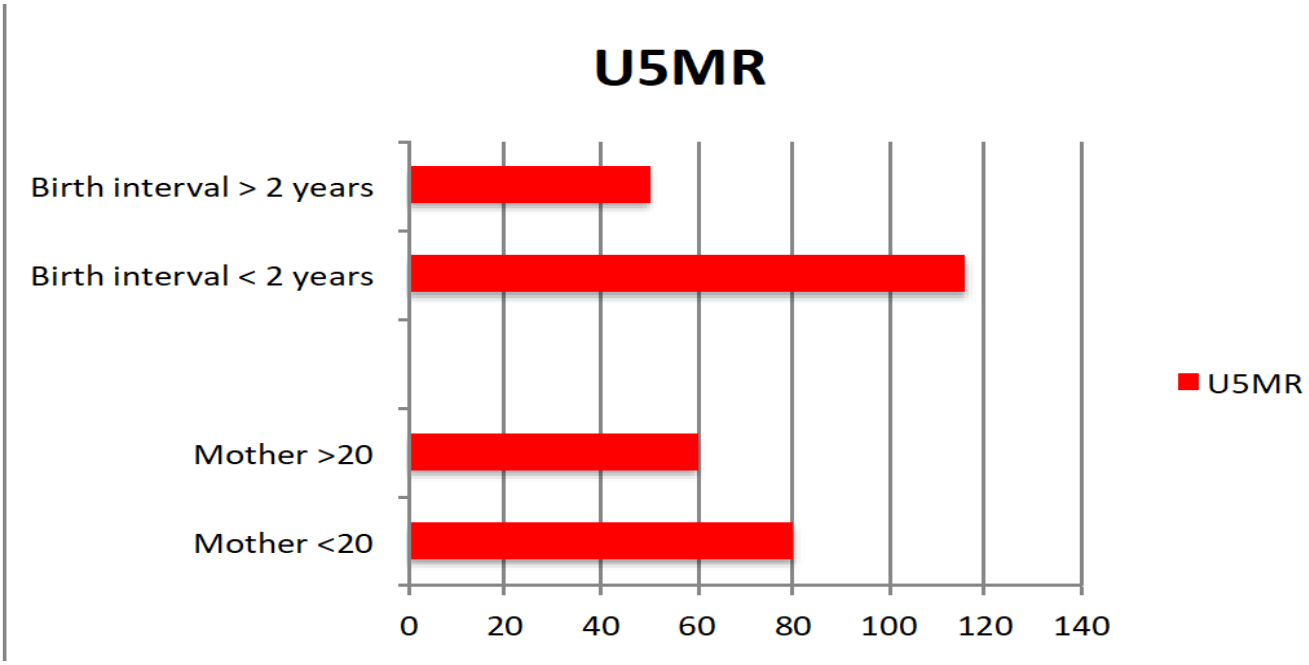
- The U5MR for mothers under 20 years is 20 points higher at 80 per 1,000 live births than it is for mothers above age 20 (60 per 1,000 live births);
- A birth interval under 2 years has huge negative impact on U5MR: the U5MR is 116 per 1,000 live births while U5MR for a birth interval longer than 2 years gives just 50 deaths per 1,000 live births.

This is very important: It shows that without any medical intervention mortality can be reduced significantly when mothers do not give birth when they are very young and when the birth interval is better spaced.

What is the possible reduction?

- 20 per cent of births take place to mothers under 20 who have a 20 points higher mortality than for mothers over 20. Avoiding births to young mothers would reduce mortality by 4 points.
- 15 per cent of births take place with a birth interval under 2 years. Mortality is 66 points higher; thus, eliminating the short birth interval will reduce mortality by 10 points.

Figure 7: Under 5 Mortality by Birth Interval and Age of Mother, 2018



Water, Sanitation and Hygiene (WASH)

For WASH, the focus is on the following categories: (at least) Basic; Limited; Unimproved; No service.

There are limitations here for WASH in that there can be no trends in data by wealth or provinces, since there are no similar data from the ZDHS reports from earlier years.

Sanitation

At least basic and limited (shared) make up the previous category of improved sanitation**. No service** in sanitation is called 'open defecation'.

Table 46: Household access to sanitation, 2014 - 2018

% of households with:	At Least Basic (improved and not shared) %	Limited (improved and shared)	Unimproved Sanitation	Open Defecation
DHS 2014	27	17	39	16
DHS 2018	33	21	36	10

The new data **are positive for Zambia**: a strong decline in open defecation and good progress in categories Basic and Limited. One in five people in Zambia uses a shared toilet. One in three has access to basic sanitation services.

Table 47: Trend in Household access to sanitation, 2014 - 2018

Sanitation, Zambia total	2014	2018	Change
Improved, not shared = Basic	27	33	+6
Improved, Shared = Limited	17	21	+4
Open Defecation	16	10	-6
Not improved	39	36	-3

The results indicate that the situation is **improving,** albeit slowly. Thirty-three per cent of the population have basic sanitation. The tables below show the changes in urban as compared with rural areas.

Table 48: Sanitation improvements – urban areas, 2014 – 2018

	At Least Basic (improved and not shared)	Limited (improved and shared)	Unimproved Sanitation	Open Defecation
DHS 2014	39	34	26	1
DHS 2018	41	38	20	1
Change	+2	+4	-6	0

In the urban areas, the improvement (change) is smaller. The decline in unimproved sanitation is mostly accounted for by the increase in shared toilets.

Table 49: Sanitation improvements – rural areas, 2014 – 2018

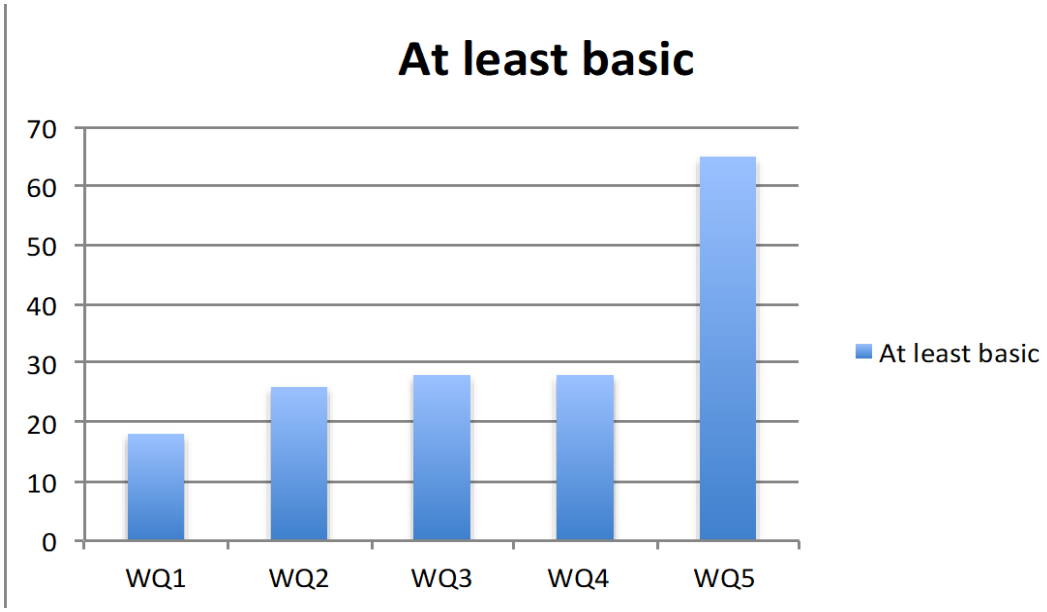
	At Least Basic (improved and not shared) %	Limited (improved and shared) %	Unimproved Sanitation %	Open Defecation %
DHS 2014	20	7	48	26
DHS 2018	28	10	47	16
Change	+8	+3	-1	-10

A very positive development in the rural areas is the important 10-point drop in open defecation. Even more positive is the increase in rates for basic and limited sanitation. But the numbers are still worrisome, with 28 per cent of the rural population still only able to access basic sanitation services.

Sanitation disparities by wealth quintiles

The distribution of 'at least basic' sanitation by wealth is very interesting as the three middle quintiles have a very similar distribution. Interestingly, the figure for WQ4 (urban poor) is 44 per cent shared. Even WQ5 (the richest) is 30 per cent shared.

Figure 6: Access to 'at least basic sanitation' by wealth quintiles, 2018



The reason for the peculiar distribution of basic sanitation in Zambia comes with the distribution of limited (shared), which is highest in WQ4.

Table 50: Access to Limited Sanitation (Improved and shared) by wealth quintile, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Limited (improved and shared)	8%	9%	14%	44%	30%

Table 51: Open Defecation by wealth quintiles, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Open Defecation	26%	13%	8%	1%	0%

Open defecation is concentrated among the poorest rural population in Zambia. By province, open defecation occurs mainly in three provinces:

Table 52: Provinces with the highest prevalence of Open Defecation, 2018

	Open Defecation %
Western	50
Southern	20
Eastern	16

Type of sanitation facilities

Zambia has more latrines than other toilet types: the pit latrine with slab (38%, improved) and the pit latrine without slab (36%, unimproved) combined make up three quarters of sanitation facilities. Flush to piped sewerage accounts for just 7 per cent and flush to septic tank another 7 per cent.

Comparing 2014 with 2018 shows that the increase in improved sanitation (basic + limited) is fully achieved by the 20 per cent increase in latrines with slab.

Water

The drinking water situation is much better as compared to sanitation, with over 70 per cent of the population using improved drinking water sources.

It is not that easy to compare the 2014 and 2018 information because the 2014 ZDHS did not separate time data (time to obtain drinking water) for improved and unimproved water; neither does the 2018 ZDHS, although the 2018 ZDHS gives the numbers for the categories 'basic' and 'limited', which the 2014 ZDHS does not.

The old category 'improved' is now split between 'At least basic' and 'Limited'. The difference between basic and limited is defined by having water on the premises or within 30 minutes (basic) or having to spend more than 30 minutes getting drinking water (limited). The category 'No service' means use of surface water.

Table 53: Water access improvements, 2014 and 2018

	At Least Basic (improved within 30mins)	Limited (improved > 30 mins)	Unimproved Water	Surface Water
DHS 2014	-	-	25	11
DHS 2018	64	6	21	8

Comparing the situation in 2014 with 2018 (using ZDHS categories) the data show an 8 per cent improvement in the category 'Improved'.

Table 54: Water access improvements, 2014 and 2018

Drinking water source	2014 (%)	2018 (%)	Absolute Difference
Improved	63	71	+8
Unimproved (without surface)	26	21	-5
Surface	11	8	-3
>30 minutes (all)	22	11	-11

The use of unimproved drinking water declined by 5 per cent, surface water use was down by 3 per cent and the time spent >30 minutes to obtain water decreased by 11 per cent, highlighting some improvements in access to water.

The following tables show the changes in urban and rural areas.

Table 55: Water access by rural/urban areas, 2014 and 2018

WATER, urban	2014 (%)	2018 (%)
Improved	89	91
Unimproved	9	8
Surface	1	1
>30 minutes (all)	13	4

WATER, rural	2014 (%)	2018 (%)
Improved	47	57
Unimproved	36	30
Surface	17	13
>30 minutes (all)	29	16

The rural–urban comparison shows:

- In urban areas no significant changes occurred; and
- In rural areas more progress was realised, as the figure for improved water (protected dug well) rose by 10 per cent and less time was spent collecting water.

The main sources of drinking water for Zambia overall are:

- Tube well (improved): 25%
- Unprotected dug well: 18%
- Piped into dwelling: 18% (41% in urban areas and 2% in rural areas)

For main types of water sources in rural areas, comparison of the 2014 and 2018 figures shows the following changes:

Table 56: Water Source, 2014 and 2018

	2014 (%)	2018 (%)
Protected dug well	10	15
Protected tube well	33	36
Unprotected dug well	31	26
Surface water	17	13

Progress in rural areas is on account of the shift from unprotected to protected wells.

The main differences, however, are found in terms of the time it takes to obtain drinking water for both (combined) improved and unimproved drinking water.

This table illustrates these differences between 2014 and 2018:

Table 57: Time needed to access water, 2014 and 2018

Time needed, total	2014 (%)	2018 (%)
Water on premises	25	35
Less than 30 minutes	51	53
30 minutes or longer	22	11
Time needed, urban	**2014**	**2018**
Water on premises	48	66
Less than 30 minutes	39	30
30 minutes or longer	13	4
Time needed, rural	**2014**	**2018**
Water on premises	10	15
Less than 30 minutes	59	69
30 minutes or longer	29	16

Overall, there has been a big increase in the availability of water on premises, especially in urban areas, and the proportion of those who had to spend 30 minutes or longer to obtain water was significantly reduced.

Availability of water (used in safely managed definition) is a major challenge:
29 per cent of the population in Zambia suffered from a lack of availability of water with 43 per cent in urban areas and 9 per cent in rural areas.

Extreme inequity in unimproved water by wealth and by provinces is observed, as the following table shows:

Table 58: Unimproved water by wealth quintiles, 2018

	WQ1	WQ2	WQ3	WQ4	WQ5	Ratio
Unimproved Water	57	42	32	13	3	19

The figures for unimproved water by province are as follows:

Table 59: Unimproved water by province, 2018

Region	Unimproved water
Northern	60
Western	56
Muchinga	48
Luapula	42

North Western	35
Southern	34
Central	26
Eastern	21
Copperbelt	19
Lusaka	2

Northern, Western, Muchinga and Luapula provinces have the highest rate of unimproved water and also exhibit huge disparities with Lusaka, the top-performing province.

Limited (improved >30 mins) by wealth quintile.

Table 60: Limited (improved >30 mins) by wealth quintile 2018

	WQ1	WQ2	WQ3	WQ4	WQ5
Limited (improved > 30mins)	6	9	11	5	2

Use of limited water is concentrated in the third wealth quintile, as well as in Southern (10%) and Eastern (8%) provinces.

Use of surface water as drinking water

The figures for use of surface water by wealth quintiles is as follows:

Table 61: Limited (improved >30 mins) by wealth quintile 2018

	Wealth index combined				
	poorest	poorer	middle	richer	richest
Surface water use	17%	17%	7%	1%	0%

Use of surface water as drinking water does not occur in richest, urban, wealth quintiles. It mostly occurs in three provinces; the rest of the provinces show a below-average incidence of surface water use.

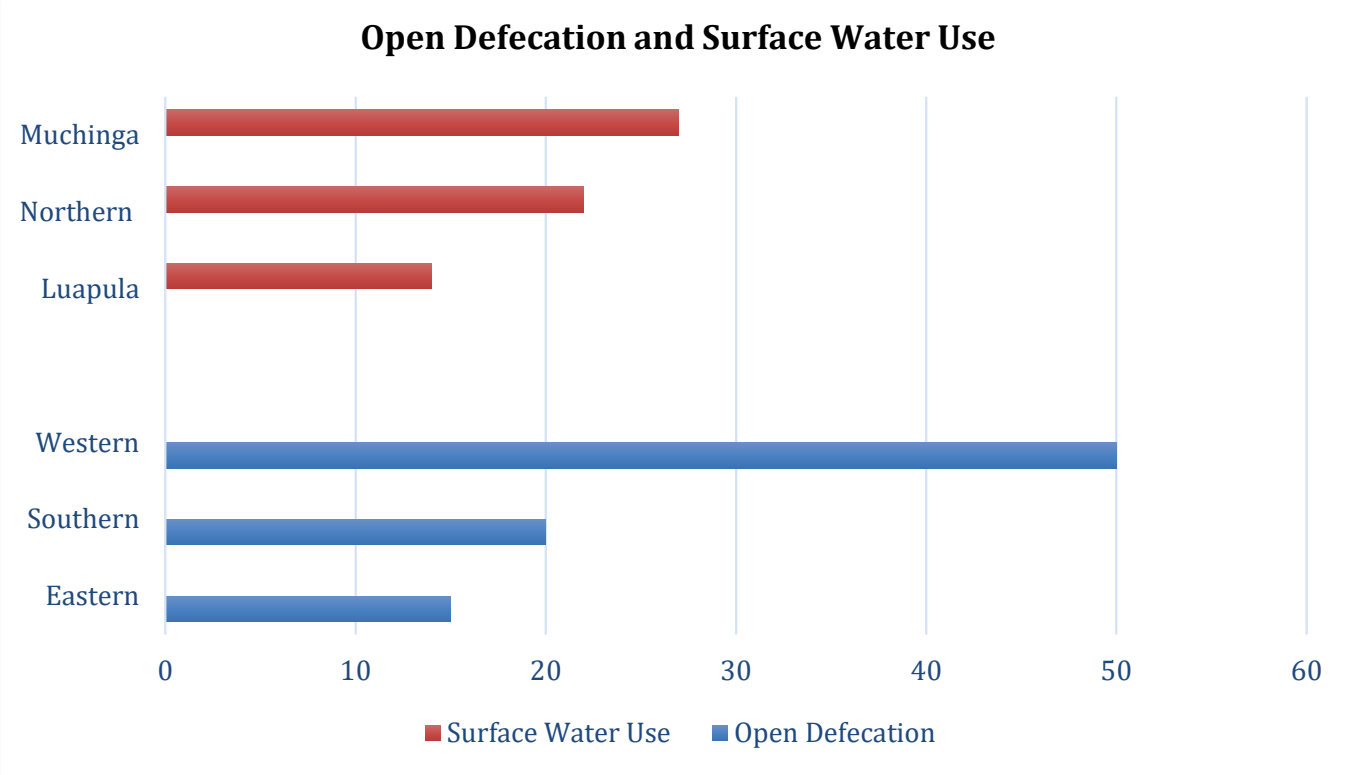
Table 62: Proportion of surface water use by Region, 2018

Region	Surface Water
Muchinga	**27**
Northern	**22**
Luapula	**14**
Total	**8**
Eastern	**7**
North Western	**7**
Western	**7**
Central	**5**
Southern	**4**
Copperbelt	**2**
Lusaka	**1**

It is important to note that: the use of surface water as drinking water has no relation at all with open defecation (OD), which was highest in Western (50%), Southern (20%) and Eastern (16%) provinces.

The use of surface water has similar rates as OD (8% versus 10%) but is predominantly present in Muchinga, Northern and Luapula, the three northern provinces.

Figure 8: Open defecation and surface water use, surface water use by highest provincial prevalence, 2018



Literacy and education

Literacy, especially literacy for women, is a key predictor for UNICEF because of the impact of literacy (education) on many child-related indicators. A crucial topline outcome from the analysis is that ***youth literacy is deteriorating, and a few years of primary education does not add anything to the literacy level***.

Zambia shows several disappointing literacy developments:

- Female youth literacy (73%) is only 7 percentage points higher than adult literacy (66%). One in 4 young women and 1 in 3 adult women (aged 15–49) are illiterate.
- Between 2014 and 2018 the literacy data did not improve: in fact, it worsened, especially in youth literacy.

Table 63: Female literacy, rural–urban, wealth quintiles, provincial comparisons, 2014 – 2018

	2014 Female Literacy	2018 Female Literacy	% change
TOTAL	68	66	-1%
URBAN	83	81	-2%
RURAL	54	54	0%

WQ	2014 Literacy	2018 Literacy	% change
WQ1	38	37	-3%
WQ2	52	51	-2%
WQ3	65	66	2%
WQ4	78	75	-4%
WQ5	93	91	-2%
Ratio	2.4	2.5	

	2014 Female Literacy	2018 Female Literacy	% change
Central	68	74	9%
Copperbelt	84	77	-8%
Eastern	49	50	2%
Luapula	48	50	4%
Lusaka	80	80	0%
Muchinga	54	52	-4%
Northern	49	47	-4%
North Western	61	64	5%
Southern	72	72	0%
Western	66	63	-5%

Apart from the rural–urban dimension, literacy disparities by wealth quintile remain highly unequal, and they changed very little over the 2014–2018 period. The provincial range is wide, ranging from

a minimum rate of 47 per cent to 80 per cent. In four provinces half of women are illiterate. The key result here is: ***a stagnant literacy situation, and one in which WQ4 and Copperbelt are doing most poorly.***

Table 64: Female/Male literacy comparison, 2014 – 2018

Adult literacy	2014	2018
15–49		
Male	83	82
Female	68	66
Gap	**15**	**16**
Average	75	74

The male adult literacy rate is 16 points higher than that for females, but both levels are falling, and when considering the wealth quintiles, there is a decline among the urban poor (WQ4) and urban rich (WQ5) , as shown in the table below.

Table 65: Male literacy by wealth quintile, 2018

Male literacy	WQ1	WQ2	WQ3	WQ4	WQ5
2014	62	71	79	91	98
2018	64	73	80	89	96
Difference	2	2	1	-2	-2

Regarding youth literacy rates, the younger generation has a much higher literacy level (80% on average) and the gap between male and female literacy is much smaller than for older age groups. However, **both youth literacy rates are in decline,** and at a faster pace than for adult literacy (the decline in youth literacy causes the decline in adult literacy). **The decline indicates that the quality of schooling needs** concerted attention to strengthen the education system and reverse the declines.

Table 66: Youth literacy, 2014 and 2018

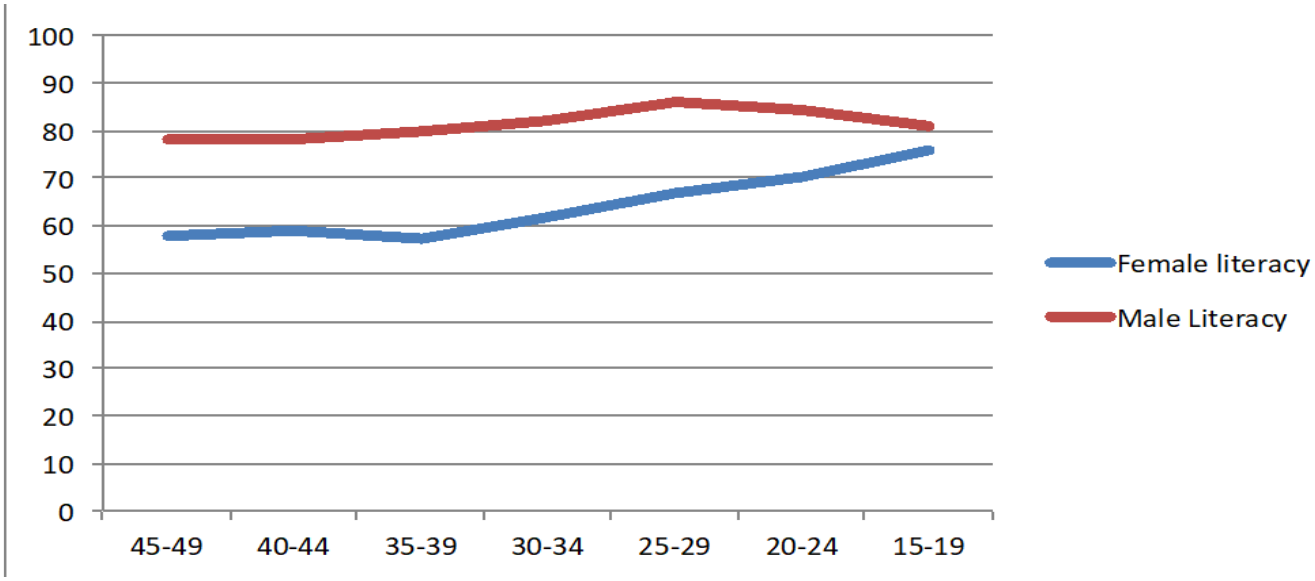
Youth literacy 15–24	2014	2018	Difference
Male	85	83	-2
Female	77	73	-4
Gap	8	9	
Average	**81**	**78**	**-3**

Looking at the literacy data by age groups (DHS 2018 data) something peculiar can be noticed:

Table 67: Literacy by age-group, 2018

DHS 2018	Age 15–19	Age 20–24
Female literacy	76	70
Male literacy	81	84

Figure 9: Literacy by age-group, 2018



The data and graph show a worrisome trend:

- Literacy for men is falling in younger age groups.
- Fewer boys are obtaining literacy skills.

The table below sheds light on the relation between schooling level and literacy for women (15–49).

Table 68: Percentage distribution of illiterate women by school level, 2018

Low educational level and literacy for women 15–49, Zambia, DHS 2018

	No education	Some primary	Low education	Illiterate
Central	6	26	32	26
Copperbelt	3	16	19	23
Eastern	13	51	64	50
Luapula	11	43	54	50
Lusaka	5	14	19	20
Muchinga	15	37	52	47
Northern	11	48	59	53
North Western	8	32	40	36
Southern	4	24	28	28
Western	13	33	46	37
TOTAL	**8**	**29**	**37**	**34**

The level of illiteracy is much higher than the proportion of women with 'no education'. Combining 'no education' with the category 'some primary' in a new category, 'low educational level', the table suggests that almost all of the 'some primary' figure is equivalent to being illiterate.

Thus, while the proportion of women with no education and some primary is 37 per cent, 34 per cent of women in this group are illiterate, **suggesting that only 3 per cent of women overall are in the category of having literacy skills after just some primary education.**

In Copperbelt and Lusaka the difference is negative, meaning that in the Copperbelt even women with more education than 'some secondary' are illiterate.

The province with the highest proportion of the population falling in the 'low education' category has the biggest difference in terms of illiteracy: **Eastern Province.**

What is the picture for male school attainment and literacy?

Table 69: Percentage distribution of illiterate males by school level, 2018

	No education	Some primary	Low education	Illiterate	Difference
Central	3	23	26	22	4
Copperbelt	2	13	15	10	5
Eastern	13	39	52	33	19
Luapula	4	33	37	20	17
Lusaka	2	11	13	10	3
Muchinga	3	31	34	23	11
Northern	4	31	35	17	18
North Western	3	23	26	19	7
Southern	2	20	22	16	6
Western	6	34	40	22	18
TOTAL	**4**	**23**	**27**	**18**	**9**
From DHS 3.3.1 and 3.2.1					
Total	**4**	**23**	**27**	**18**	**9**
Urban	2	10	12	9	3
Rural	6	34	40	26	14

Males have lower levels of illiteracy and higher levels of education. In terms of young people aged 15–24 some relevant figures are shown in the table below.

Table 70: Comparisons of education & literacy, female-male, 2018

	No education	Some primary	Low education	Illiterate
Female 15–19	3.3	25.6	29	24
Female 20–24	3.9	28.8	33	30
Male 15–19	2.7	32.5	35	19
Male 20–24	3.5	15.1	19	16

The analysis shows that:

- Boys go to school too late and stay longer in the system; the number of boys aged 15-19 still at primary school is very high
- NAR for boys is much lower than for girls, but gross attendance rate (GAR) is marginally lower by one percentage point
- Boys drop out of school more often than girls

The previous analysis highlighted that many people who went to school (even for several years) are illiterate. The table below provides more detail by giving the distribution of illiterate women by educational level.

Table 71: Literacy and education years completed, 2018

Background characteristics	No education	Some primary	Completed primary	Some secondary	Completed secondary
All women	**8**	**29**	**15**	**32**	**17**
Illiterate women	**22**	**57**	**13**	**7**	**1**

The table shows that:

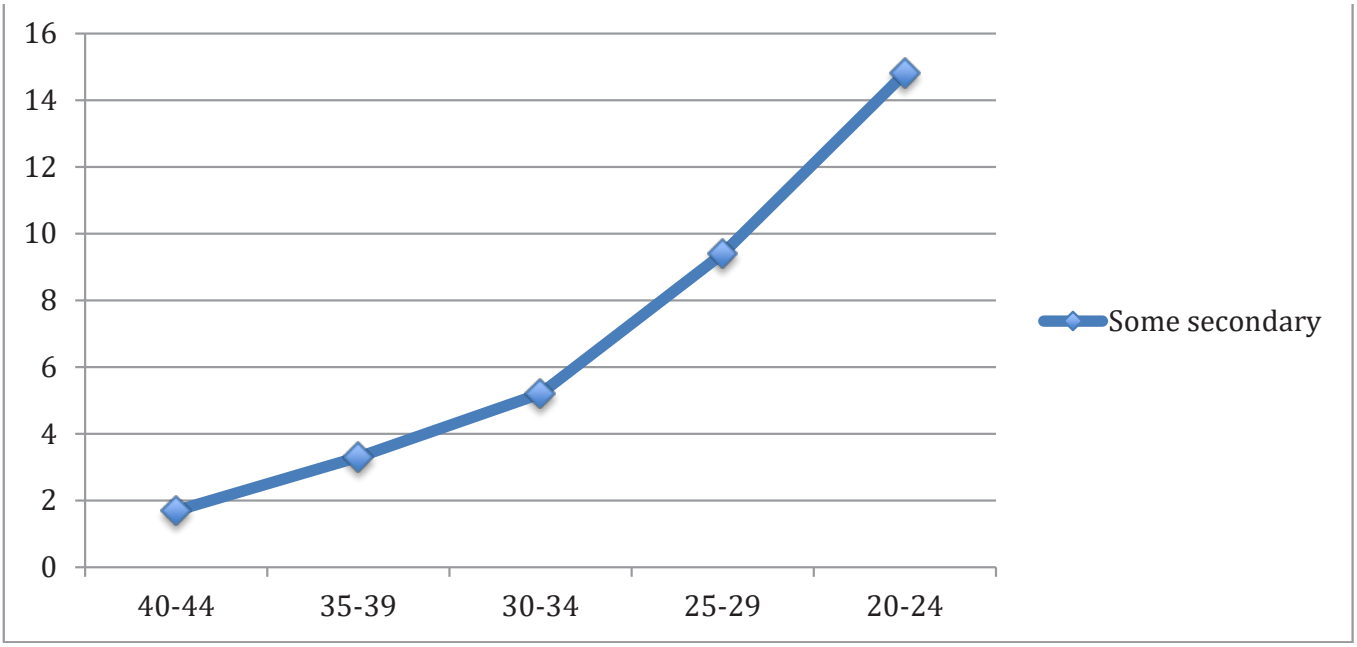
- One fifth (21%, 13+7+1) of the women that are illiterate (33% of total) have completed primary or more.
- Only 22 per cent of women who are illiterate had no education at all, thus 78 per cent had some or even a lot of education.
- The biggest proportion of illiterate women (57%) had some primary education.

Another result relates to illiterate women with some secondary education, as shown in the table and graph below.

Table 72: Literacy and education (secondary) years completed, 2018

Age	Some secondary
20–24	15
25–29	9
30-34	5
35–39	3
40–44	2

Figure 10: Percentage of women who are illiterate and who have some secondary education, by age group, 2018



The figure shows that the percentage of women who have some secondary education but are illiterate is rising in the younger age groups, indicating a deterioration of quality of education. But this is not the only finding confirming the decline in education standards. The following table presents similar information.

Table 73: Percentage of Illiterate women by education level, 2018

Background characteristics	No education	Some primary	Completed primary	Some secondary	Completed secondary
Illiterate girls (15–19)	13	58	16	12	1
Illiterate women (20–49)	22	57	13	7	1

The table shows that some girls (16%) and women (13%) that are illiterate have completed primary.

The following table shows the figures for illiteracy among women aged 15 to 49 in terms of rural vs. urban characteristics.

Table 74: Percentage of Illiterate women by education level, 2018

Background characteristics	No education	Some primary	Completed primary	Some secondary	Completed secondary	Number
Residence						
Urban	7	37	23	28	5	384
Rural	15	64	13	7	0	1,153

In rural areas 20 per cent and in urban areas 56 per cent of illiterate girls have completed primary or more! Boys show the same deterioration over time:

Table 75: Percentage of men who are illiterate and who have some secondary education, by age group, 2018

Background characteristics illiterate males	Some secondary
Age	
20–24	11
25–29	9
30–34	4
35–39	3
40–44	3
45–49	2

The younger age group of illiterate males had higher proportions with some secondary education than for the older groups.

Slightly fewer males than females who were illiterate had above primary education:

Table 76: Percentage of males and females who are illiterate by level of education, 2018

Background characteristics	No education	Some primary	Completed primary	Some secondary	Completed secondary	Number
Total illiterate Males	20	61	12	6	0	2,006
Total illiterate Females	22	57	13	7	1	4,585

Table 77: Percentage of youths who are illiterate by level of education, 2018

Background characteristics	No education	Some primary	Completed primary	Some secondary	Completed secondary
Total Boys	17	64	11	8	0
Total Girls	13	58	16	12	1

Young women of 15–24 had even higher educational levels than males and the older generation of women. The biggest group had 'some primary education'. With such high illiteracy it would be reasonable to assume that 'some' primary education amounted to just 1 or 2 years, but that is not the case: 60 per cent had 4 or more years of education. And in WQ4, 70 per cent had 5 years or more.

Figure 11: Illiteracy among women with some primary education, by years of education, 2018

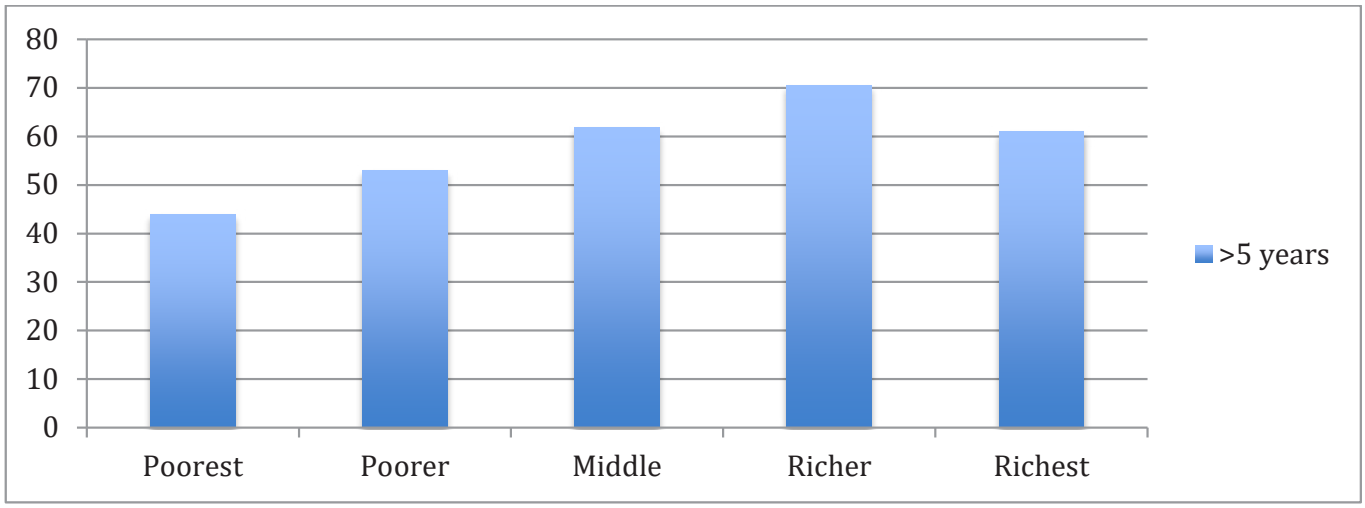
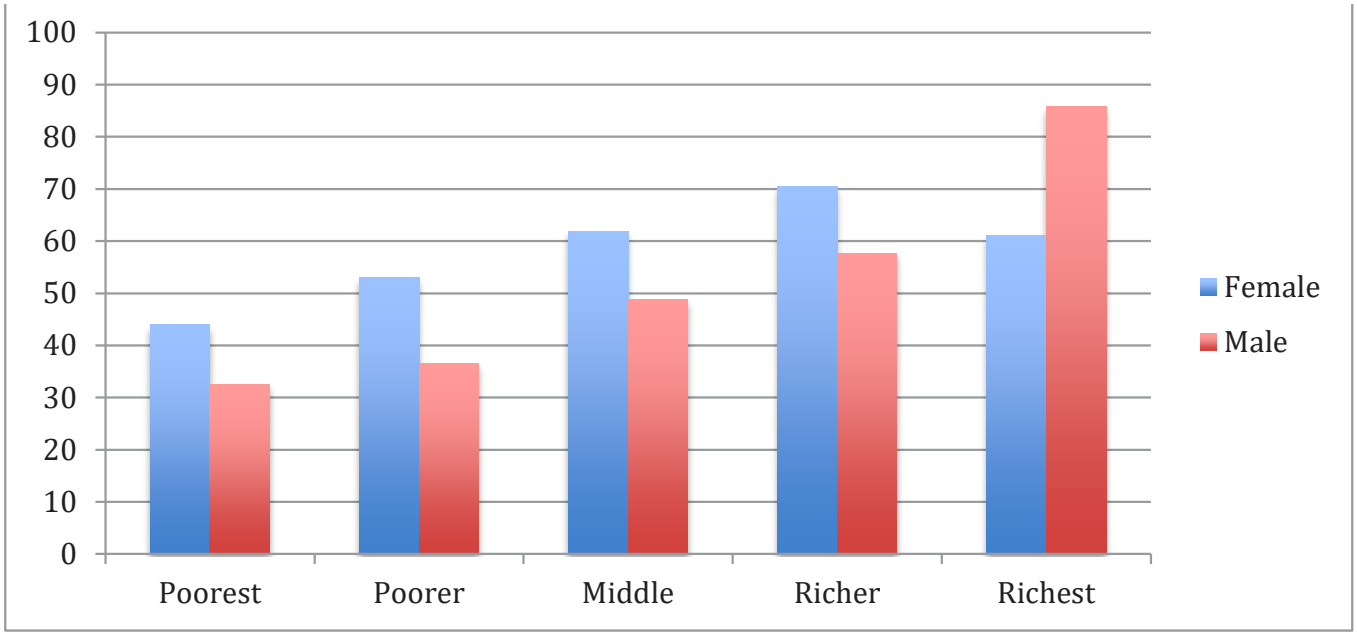


Figure 12: Many illiterate women had less than five years' primary schooling, 2018



Primary education

The DHS survey results present a slightly deteriorating situation for primary education. The most worrying trend is the decline in the net attendance rate (NAR) in primary schools in Central Province.

Table 78: Net Attendance Rate (%), 2018

	NAR Primary (2014)	NAR Primary (2018)	Difference
Central	83	74	-11%
TOTAL	**80**	**79**	**-1%**
URBAN	84	83	-1%
RURAL	79	77	-3%

The gross attendance rate is 20 points higher than that for net attendance, confirming that many children (especially boys) enter the school system too late. Boys of 15 and 16 are still in primary school.

Table 79: Primary attendance rate (%) by wealth quintile (WQ)

	2014	2018	
WQ	**NAR Primary**	**NAR Primary**	**% change**
WQ1	70	69	-1%
WQ2	79	76	-4%
WQ3	83	82	-1%
WQ4	85	84	-1%
WQ5	86	85	-1%
Ratio	**1.2**	**1.2**	

The table shows that disparities by wealth quintile in primary education are low and stable.

Looking at the data by provinces reveals some interesting features.

Table 80: Net attendance rate by province, 2014 – 2018

	2014	2018	Absolute
	NAR Primary	**NAR Primary**	**Difference**
Central	83	74	-11%
Copperbelt	81	81	0%
Eastern	70	70	0%
Luapula	77	72	-6%
Lusaka	85	84	-1%
Muchinga	82	80	-2%
Northern	79	78	-1%
North Western	82	83	1%
Southern	85	84	-1%
Western	79	83	5%

The table shows that the poorest province, Western, is improving the most and has almost reached the level of Lusaka. Central Province is deteriorating with an absolute difference of -11 per cent.

Secondary education: Rural/urban differences

With reference to secondary NAR, the urban/rural differences in 2014 and 2018 are shown in the table below.

Table 81: Net attendance rate by rural/urban areas, 2018

NAR Secondary	Total	Urban	Rural
2014	40	58	27
2018	40	56	29

NAR for secondary school is a very low at 40 per cent, but it is stable (same as 2014). The urban NAR in 2014 and 2018 was 58 and 56 respectively. The higher NAR is due to young people entering secondary school at age 15 instead of age 13 and also children repeating school years.

Table 82: Net attendance ratio for secondary schools by wealth quintiles

WQ	WQ1	WQ2	WQ3	WQ4	WQ5	Ratio
NAR SEC	11	25	37	50	67	**6.1**

Even wealth quintile 5 (richest) is low at 67, but this indicator has very strong disparities (a ratio of 6.1), especially as compared to the more modest disparities in primary education 85/69= 1.2.

A disparity analysis shows the following figures.

Table 83: Net attendance ratio for secondary schools by wealth quintiles, 2014 – 2018

	2014	2018	
WQ	**NAR SEC**	**NAR SEC**	**% change**
WQ1	14	11	-21%
WQ2	24	25	4%
WQ3	32	37	16%
WQ4	49	50	2%
WQ5	69	67	-3%
Ratio	**4.9**	**6.1**	

This is disappointing: inequality has increased due to a decline in attendance among the poorest!

The 2014–2018 period shows a stable situation overall with worrying developments in Luapula and Eastern provinces (NAR below 30%) and also in Copperbelt.

Table 84: Net attendance ratio for secondary schools by provinces:

NAR Sec.	2014	2018	Progress
Central	35	36	3%
Copperbelt	60	52	-13%
Eastern	22	21	-5%
Luapula	32	28	-13%
Lusaka	54	55	2%
Muchinga	31	31	0%
Northern	29	37	28%
N Western	41	49	20%
Southern	35	40	14%
Western	34	37	9%

Table 84: Education attainment of women 15–19 years, 2018

Women 15–19 educational attainment	No	Some Primary	Primary completed	Some secondary	Secondary completed
2014	3	28	14	50	5
2018	3	29	14	48	6

Two observations:

- Regarding the educational attainment of women in this age group, 2018 and 2014 are similar.
- It also shows that around 55 per cent of women will ultimately attend secondary.

The attainment figures for women aged 20–24 show 22 per cent with 'some primary' education, meaning that a significant proportion of girls 15–16 years of age are still in primary school.

The attainment figures for women aged 15–49 by age group are showing progress over time, but the net attendance rates are stagnant. This means that recently progress has stalled and is even declining, in Copperbelt Province, for example.

Gender dynamics in education attendance

The results show gender disparity to be stable in primary education between 2014 and 2018. At Secondary level the gender parity index indicates that there were more males than females. The 2018 gender parity index is more in line with the fact that more boys than girls attend at any age between 14 and 18 years.

Table 85: Gender dynamics in education attendance, 2018

GENDER	Male (%)	Female (%)	Gender parity index
Prim-2014	79	82	1.04
Prim-2018	77	81	1.05
Sec 2014	39	41	1.05
Sec 2018	42	38	0.9

More girls attend school at lower ages but after age 14–15 more boys attend. At all ages up to 14% more girls are in school, but after the age 14-15, it is the boys that continue. The numbers lead to the conclusion that drop-out in secondary education is high, given the much lower attendance rates and given the numbers for 'some secondary' education.

Table 86: Education attainment for males and females in age range 20 – 24, 2018

2018	Some secondary schooling (%)	Secondary completed (%)	Higher	Total
Female 20–24	37	19	5	61
Males 20–24	37	26	7	70

The NAR for secondary education is 38 for girls age 14–18, and the GAR is 58. Educational attainment for women aged 20–24 is 37 per cent 'some secondary', 19 per cent 'completed secondary' and 6 per cent higher (for women aged 15–49 the figures are 32%, 11% and 6% respectively). These numbers confirm that secondary education has a high drop-out rate; many do not and will not finish secondary education.

Out-of-school children

The 2018 ZDHS reveals that 4 per cent of children *never attended school.* However, the fact is that among women aged 15–49 the percentage who record 'no education' is 8 per cent and those with 'some primary' 37 per cent, while illiteracy stands at 34 per cent.

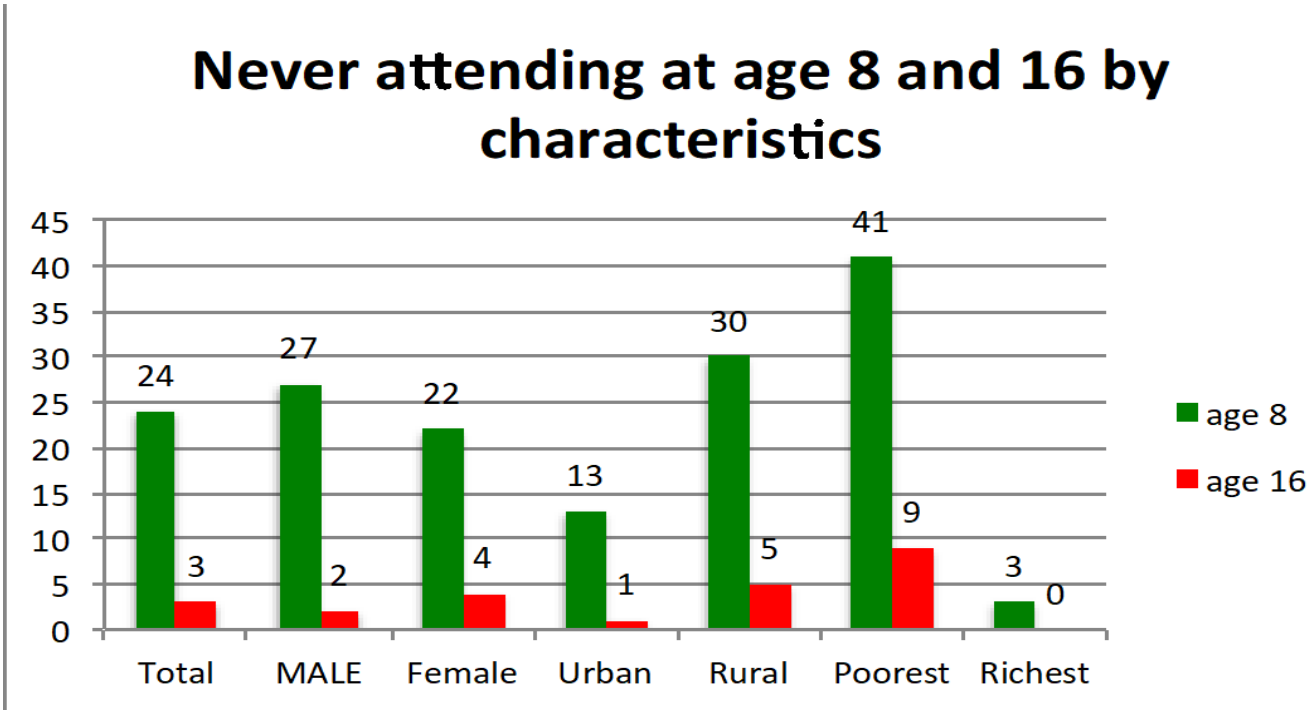
To repeat the key observations:

- Children in Zambia enter the school system way too late, especially rural children.
- Last in and first out: the rural children, the children in the poorest quintiles enter school late but too many do not finish primary education, as is shown by the drop-out rates in the tables.
- Rich children enter the school system at a very young age, poor children way too late. As a result, the system showed many age groups in one grade.

Table 87: Percentage of males and females who never attended school by rural/urban areas and wealth status, 2018

NEVER Attended school							
Age	**Total**	MALE	Female	Urban	Rural	Poorest	Richest
8	24	27	22	13	30	41	3
16	3	2	4	1	5	9	0
15–24	17	18	15	9	22	31	3

Figure 13: Percentage of males and females who never attended school by rural/urban areas and wealth status 2018

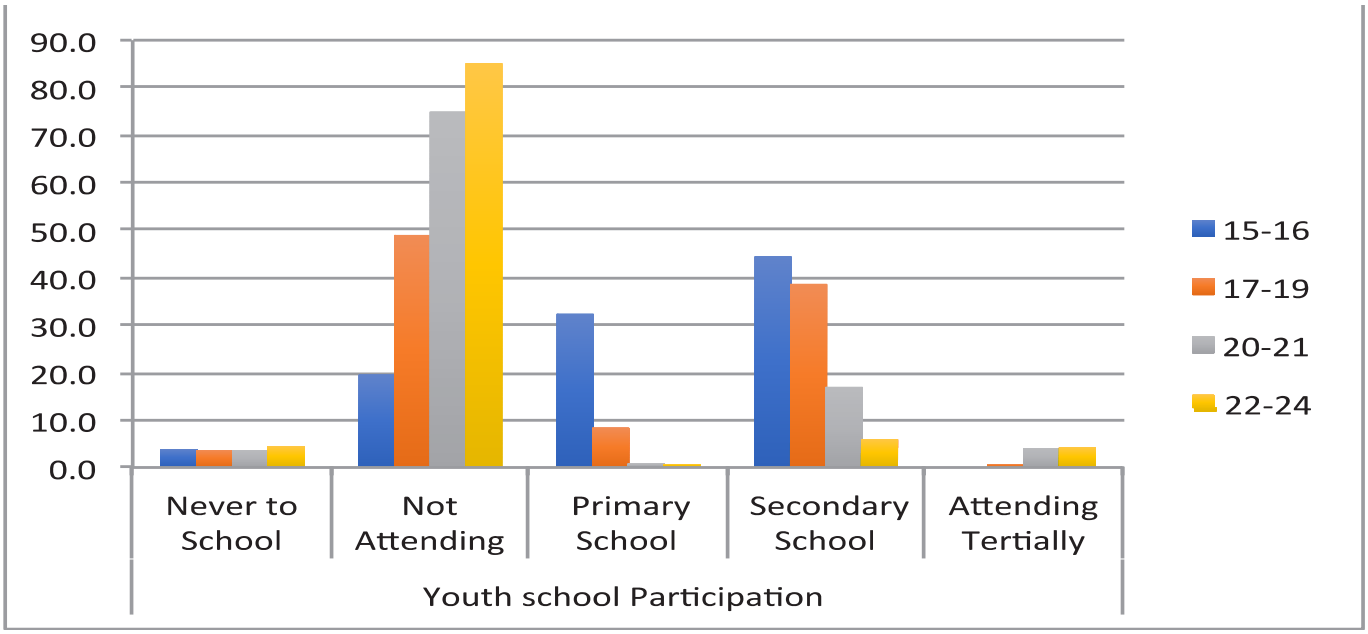


The above table and graph reveal the following:

- The lowest 'never attended' rate is 3 per cent for age 16.
- At age 8, one in 4 children have never been to school, more boys than girls, 'never attended' rates are much higher in rural than urban areas (30% compared with 13%) and many more of the poorest children (41%) have never attended school as compared to the richest (3%).
- At age 16 the differences are much smaller, indicating that in the end 95 per cent of the rural population and 90 per cent of the poorest group do make it into the education system.

The data show that 18 per cent of youth aged 15–19 are still attending primary school. Very few youths attend above secondary education (tertiary).

Figure 14: Youth school participation, 2018



After the age of 16 more than half the youth are out of school. Participation in secondary education is highest at age 15–16, at 44 per cent. Very few youths undergo tertiary education.

Table 88: Youth school participation by gender, 2018

	Youth School Participation				
	Never to School	Not Attending	Primary	Secondary	Tertiary
15-19					
Male	3.7	30.8	20.8	44.3	0
Female	3.6	43.8	14.5	37.6	0
20-24					
Male	3.9	76.2	0.9	14.4	4.6
Female	4.1	84.2	0.3	7.7	3.7

In the age group 15–19, 13 per cent more girls than boys have already left school and 6 per cent more boys than girls are still at primary, showing what we observed before: that boys move more slowly through the education system, but boys do attend secondary school more often. For most girls more than for boys finishing primary school is the end station.

Table 89: Youth school participation: rural–urban split, ages 15–24, 2018

	Youth School Participation				
Region	Never to School	Not Attending	Primary	Secondary	Tertiary
Urban	1	33	9	56	1
Rural	5	41	23	31	0

Rural children are being left behind when it comes to school attendance:

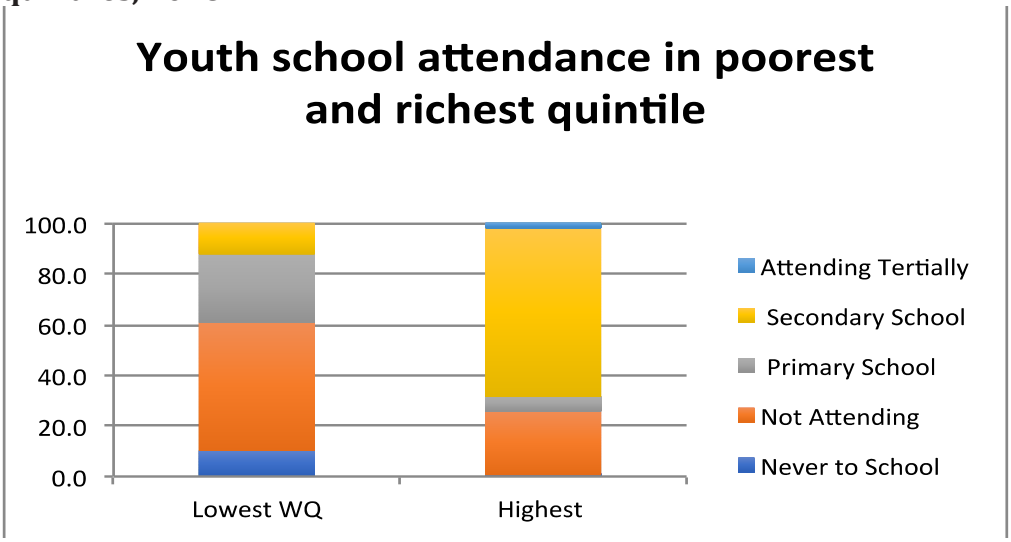
- Rural children are five times more likely never to have attended school than urban children.
- Rural youth are also more often already not attending, are more behind (attending primary) and not even one in three is attending secondary education (25% below urban youth).

- The highest proportions of young people who have 'never attended school' are in Eastern
- Province (8%), Muchinga Province (7%) and Luapula Province (6%).
- Those three provinces, plus Northern Province, have 25 per cent of youth in primary education while the national average is 18 per cent (Copperbelt is 9%).

The attendance figures for the poorest wealth quintile in the age group 15–19 are worrisome:

- 10% of them have never attended school.
- 50% are out of school.
- 27% attend primary and just 12% are in secondary education.

Figure 15: Comparison of youth school attendance between the poorest and richest wealth quintiles, 2018

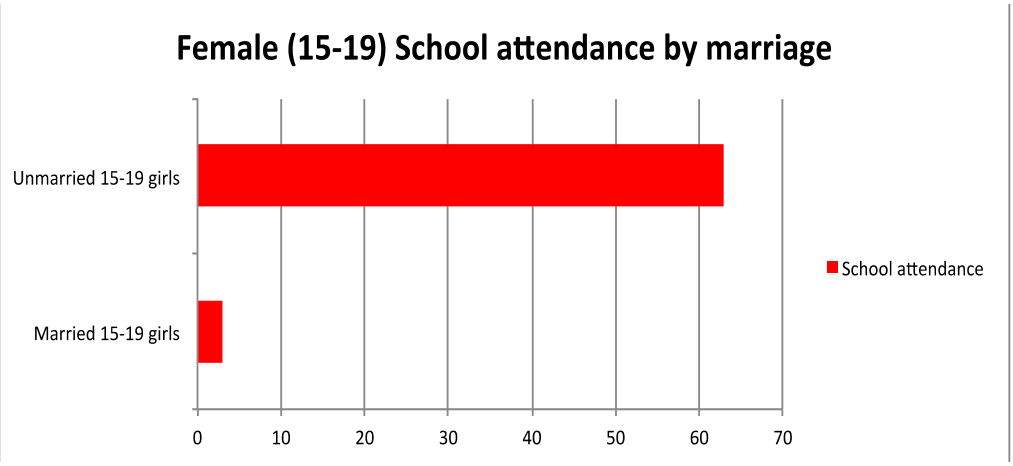


In the age group 20–24, 1 per cent of the rural population and 8 per cent of the urban population attend higher education. Access to higher education is higher for those from the richest quintile.

Another reason why there are more girls than boys out of school is early marriage.

The triangulation of school attendance by marriage is shown in the graph below.

Figure 16: Female school attendance by marital status, 2018



Only 3 per cent of the married girls aged 15–19 attend school compared to 62 per cent of unmarried girls, indicating the big difference marriage makes in influencing school attendance.

Early childhood education

Attending pre-school is a function of age, as shown in the table below.

Table 90: Pre-school attendance, 2018

Background characteristics	Attended pre-school	Attended pre-school	Attended pre-school
	Male	Female	Total
Age			
2	3	3	3
3	14	16	15
4	21	24	22
TOTAL	**13**	**14**	**14**

At age 4, only 22 per cent of children are attending pre-school. Girls attend more than boys, already at age 3. And in rural areas attendance is only 5 per cent.

Pre-school attendance is strongly related to education of the mother, as shown below.

Table 91: Mother's education and pre-school attendance, 2018

	Attended pre-school (%) total
Mother's education	
No education or incomplete primary	6
Primary or incomplete secondary	13
secondary or higher	49

Boys' attendance is higher in the richest wealth quintile, as shown in the table below.

Table 92: Pre-school attendance by wealth quintile, 2018

	Attended pre-school	Attended pre-school	Attended pre-school
	Male	Female	Total
Wealth quintile			
Poorest	2	4	3
Poorer	4	4	4
Middle	5	8	7
Richer	19	24	21
Richest	47	39	43
Total	**13**	**14**	**13**

Maternal health

Maternal health indicators in Zambia have very good levels and are making even further progress.

Table 93: Antenatal care (ANC) by skilled provider, 2007 - 2018

Trend: Received ANC from skilled provider	**2007**	**2014**	**2018**
Total (%)	94	96	97

The proportion of pregnant mothers who had four or more ANC visits is going up; it is now at 64 per cent, but prior to 2007 it was 60 per cent.

Table 94: 4+ ANC visits, 2007 - 2018

Trend: Had 4+ ANC visits	**2007**	**2014**	**2018**
Total (%)	60	56	64

Components of maternal care: The rate for blood pressure and blood sample taken is very good (95%), but that for urine sample taken is low (65%).

Table 95: Key components of maternal care, 2014 – 2018

	2014	**2018**
Blood pressure taken	89	95
Urine sample taken	41	65
Blood sample taken	94	96

It is interesting to note how much the figure for 'urine sample taken' improved in the four-year period.

Table 96: Key components of maternal care (Urine sample) by wealth quintile and rural/urban region, 2014 – 2018

	Urine sample taken		
	2014	2018	Increase
TOTAL	41	65	59%
URBAN	58	76	31%
RURAL	32	58	81%
WQ	**Urine sample taken**		
WQ1	23	51	122%
WQ2	30	57	90%
WQ3	40	69	73%
WQ4	52	73	40%
WQ5	68	80	18%
Ratio	**3.0**	**1.6**	

The table above shows some very positive news: the strongest increases in the rates for 'urine sample taken' are among the poorest rural pregnant mothers.

With regard to this indicator, provinces fell into two groups in 2018: those with value between 42 and 50 and those with values between 72 and 78.

Table 97: Provincial distribution of urine sample taken, 2014 – 2018

Province	Urine sample taken 2014	2018	% Increase
Central	35	72	106%
Copperbelt	58	74	28%
Eastern	35	72	106%
Luapula	17	42	147%
Lusaka	61	78	28%
Muchinga	24	49	104%
Northern	19	47	147%
North Western	34	50	47%
Southern	58	76	31%
Western	24	51	113%

Progress in Copperbelt and Lusaka provinces was less than in Luapula, Northern and Western provinces; these provinces are still among those with the lowest figures, despite the progress.

With regard to births in a health facility, as the table below shows, Zambia achieved a 25 per cent increase between 2014 and 2018. This increase was concentrated in rural areas (urban areas were at a high level already).

Table 98: Trends in health facility delivery, 2007 – 2018

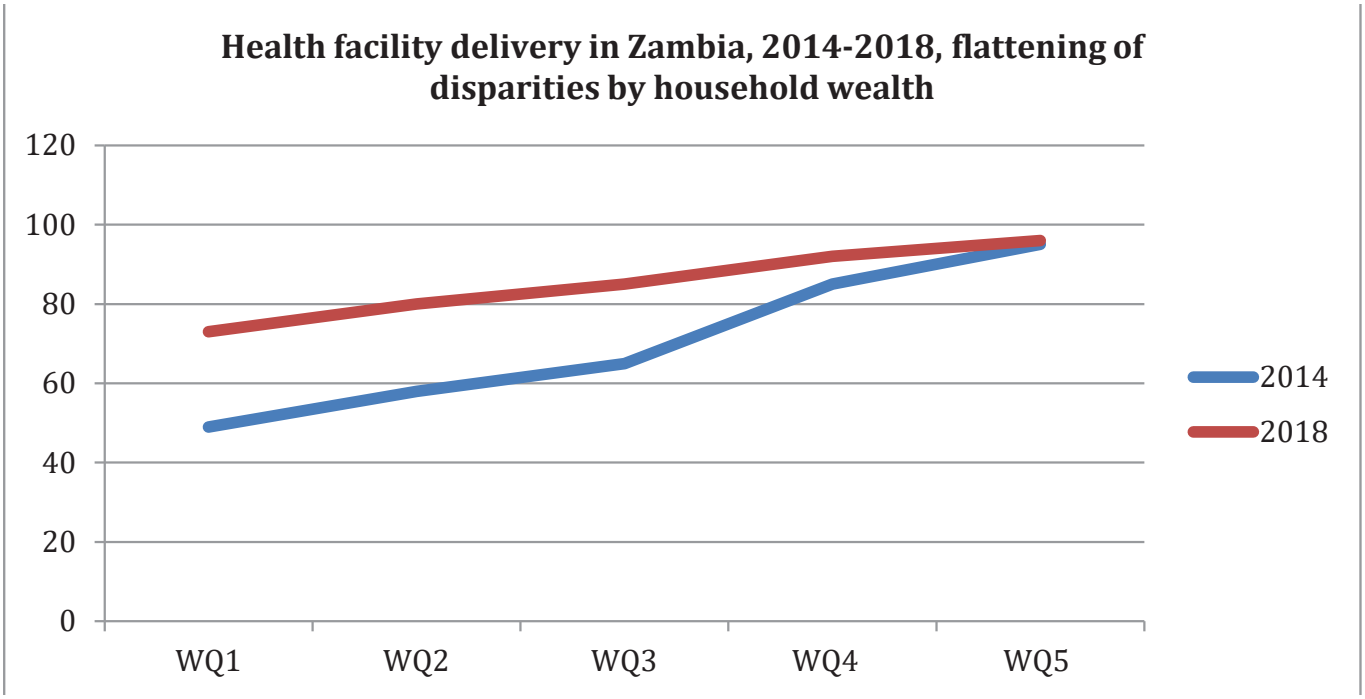
Health facility delivery	2007	2014	2018
Total (%)	48	67	84

Table 99: Rural–urban split for health facility delivery, wealth quintiles, 2014 – 2018

	Health facility delivery		
	2014	2018	Increase
TOTAL	67	84	25%
URBAN	84	93	11%
RURAL	56	79	41%
WQ	Health facility delivery		
WQ1	49	73	49%
WQ2	58	80	38%
WQ3	65	85	31%
WQ4	85	92	8%
WQ5	95	96	1%

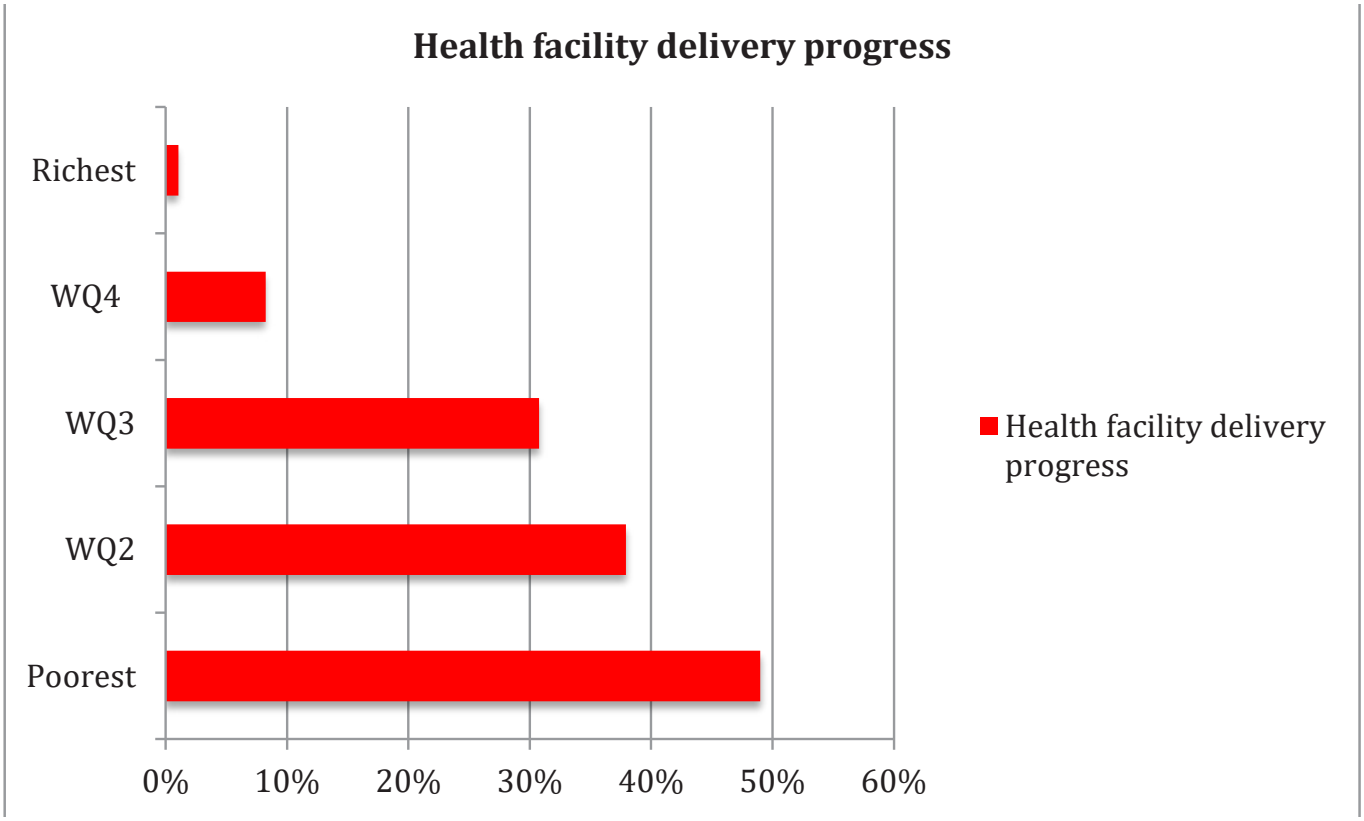
Between 2014 and 2018, health facility delivery in Zambia showed a flattening of disparities by household wealth:

Figure 17: Trends in Health facility delivery progress by wealth category, 2014 & 2018



Within the wealth quintiles, the poor are making significant progress in health facility delivery:

Figure 18: Health facility delivery progress by wealth category, 2018



Data by provinces are also very interesting, as shown below.

Table 100: Trends in Health facility delivery progress by province, 2014 & 2018

	Health facility delivery		
Province	**2014**	**2018**	**Progress**
Central	48	72	50%
Copperbelt	83	91	10%
Eastern	71	90	27%
Luapula	68	88	29%
Lusaka	90	91	1%
Muchinga	61	76	25%
Northern	48	72	50%
North Western	75	88	17%
Southern	56	82	46%
Western	62	74	19%

Good progress has been made in the two weakest provinces; Central and Northern. In regions with higher levels, less growth is possible (see Lusaka and Copperbelt); however, with a rise of just 1 per cent it is still a disappointing result for Lusaka.

The *most disappointing figure is for Western Province*, which made limited progress relative to the other poorer provinces.

Some observations from the data include:

- Rate of skilled birth attendance (SBA) mirrors place of delivery.
- Caesarean section is a function of richer urban women.
- The timing of the first postnatal check-up is not that important.
- Content of postnatal care for newborns data are new, so it is not possible to determine a trend.

Pregnancy Related Mortality

The 2018 DHS report notes on p. 278:

- The maternal mortality ratio for the 7-year period before the 2018 ZDHS is estimated at 252 maternal deaths per 100,000 live births; that is, for every 1,000 births in Zambia, about three women die during pregnancy, childbirth, or within 42 days of the end of a pregnancy from causes other than an accident or violence. The confidence interval surrounding the maternal mortality estimate is 158 to 347 deaths per 100,000 live births. However, the pregnancy related mortality ratio for 2018 which is comparable to what was reported in the previous ZDHSs is estimated at 278 pregnancy related deaths per 100,000 live births.

Pregnancy related mortality ratios (PRMR) from 2002 to 2018 are shown below.

Table 101: Trends in PRMR 2002 - 2018

	2002	2007	2014	2018
MMR	729	591	398	278

The PRMR shows a marked decline over the years in question, although the 2014–2018 figure is within the huge confidence intervals. At current fertility and mortality rates, 1 per cent of women in Zambia will die from pregnancy related causes while in the reproductive age range (age 15–49).

PRM is still a very significant problem in Zambia, despite the drop in incidence, and despite the quite good maternal health indicators. There is a need for a surge in the quality of maternal health.

Child health

Vaccinations

Between 2014 and 2018 a very good increase in immunisation was realised, and a good level was achieved in areas where it matters most.

Table 102: Trends in basic vaccinations (%), 2007 – 2018

All basic vaccinations	2007	2014	2018
Total	68	68	75

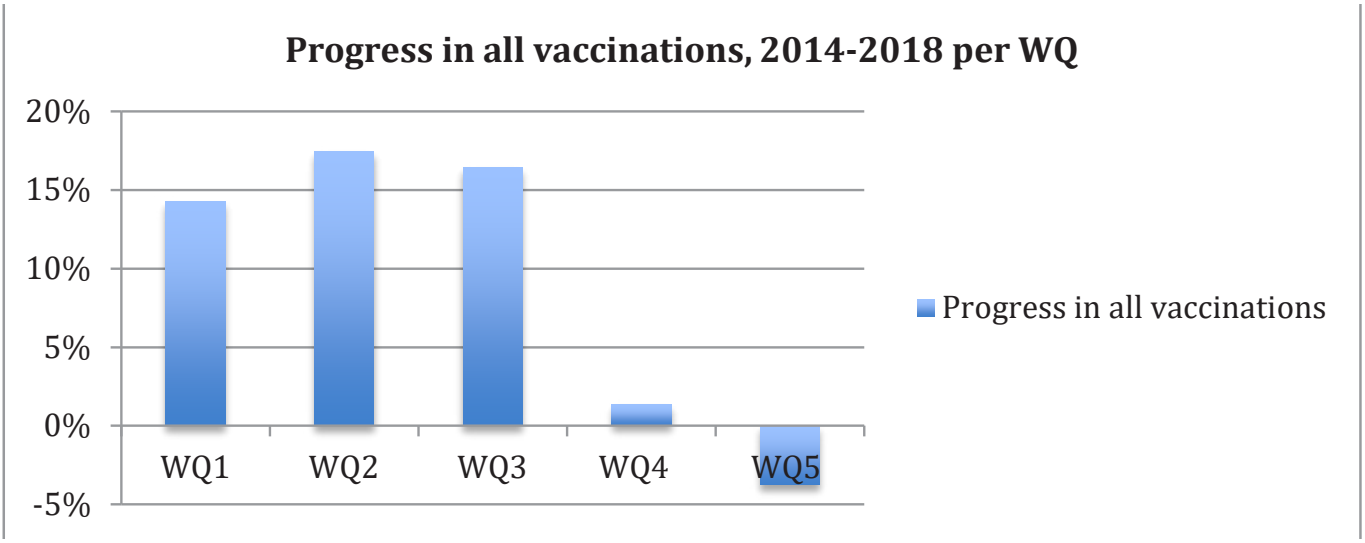
In the rural areas, and amongst the poorest, good progress was made, as shown in the table below.

Table 103: Basic vaccinations: Rural–urban, wealth quintiles

	All Basic vaccinations		
	2014	2018	Change
TOTAL	68	75	10%
URBAN	76	77	1%
RURAL	65	74	14%
WQ	All Basic vaccinations		
WQ1	63	72	14%
WQ2	63	74	17%
WQ3	67	78	16%
WQ4	75	76	1%
WQ5	80	77	-4%

Equity was almost achieved by household wealth, as the ratio declined from 1.3 to 1.1. But equity was partly achieved because of the decrease in WQ5 and because of the lack of improvement in WQ4.

Figure 19: Progress in all vaccinations per wealth quintile, 2014 – 2018



When looking at vaccinations by provinces, the results show:

- Eastern Province has been promoted from worst performing to best performing, with the highest rate of increase.
- Luapula and Muchinga provinces are constantly in the red but with average growth.
- Central and Western provinces are making good progress.
- Lusaka and Copperbelt provinces again recorded the least progress.

Table 104: All basic vaccinations by province, 2014 - 2018

	All Basic vaccinations		
Province	**2014**	**2018**	**Progress**
Central	66	79	20%
Copperbelt	81	83	2%
Eastern	64	79	23%
Luapula	60	67	12%
Lusaka	72	73	1%
Muchinga	61	68	11%
Northern	72	76	6%
North Western	63	75	19%
Southern	69	75	9%
Western	64	68	6%

A key positive observation is that hospital delivery and vaccination rates are both on the road to equity.

Diarrhoea

The DHS 2018 reports the prevalence of diarrhoea at 15 per cent (in urban as well as rural areas) as compared to 16 per cent in 2014 - thus the rate is constant.

The combined analysis of WASH and diarrhoea shows:

- A positive relation with improved water (14% versus 17% for unimproved water).
- A positive relation with sanitation: improved is 14, unimproved is 16 and OD is 17 per cent.
- Diarrhoea rates are almost 20 per cent lower when people have access to improved water and sanitation.
- Diarrhoea is seasonal and there is no correlation between the 2014 and 2018 results. The relation with household wealth is weak, WQ1= 17 to WQ5=13, thus basically equal despite the mentioned relations with improved water and sanitation.

Table 105: Diarrhoea prevalence by province, 2018

Province	**Diarrhoea prevalence 2018**
Central	11
Copperbelt	14
Eastern	15
Luapula	17
Lusaka	14
Muchinga	18
Northern	15
North Western	15
Southern	16
Western	23

Most provinces are within the same range, but Muchinga and Western provinces have a much higher prevalence of diarrhoea and Central Province a much lower prevalence.

Nutrition

Nutrition indicators are also very crucial for early childhood development, and some of the findings of the 2018 DHS include:

- The overall figure for children aged 6-23 months fed a minimum acceptable diet (MAD) was 13 per cent; a very low figure.
- The proportion of 'wasted' children (those who are thin for their height) has no relation with WQ.

Table 106: Nutrition trends, 2014–2018 (% of children under 5 who are malnourished)

	2014	2018	% change
Stunted	40	35	13%
Severely stunted	17	12	30%
Minimum dietary diversity (MDD)	22	23	Stagnant
Minimum acceptable diet	11	13	Low levels

Stunting

In the 2014–2018 period the rate of stunting in this group showed a reasonable improvement, dropping from 40 per cent to 35 per cent, a 13 per cent decline. **Severe stunting** reduced significantly: from 17 to 12 per cent (this will translate into much lower mortality).

In 2018 the following trends were observed with regard to stunting:

- Age: the highest figure for stunting was in the age group 18–23 months: 46 per cent (severe stunting 20%).
- Sex: Male stunting is (38) much higher than female stunting (31).
- Area: there is a small difference between urban (32) and rural (36) stunting rates.
- Province: The province with the most extreme stunting rate is Northern Province at 46 (19 per cent severe

Over time the declines by wealth index quintile are quite similar except for WQ4, the urban poor, which has seen a below-average drop. The urban poor have high stunting.

Table 107: Stunting by wealth quintiles, 2014 – 2018

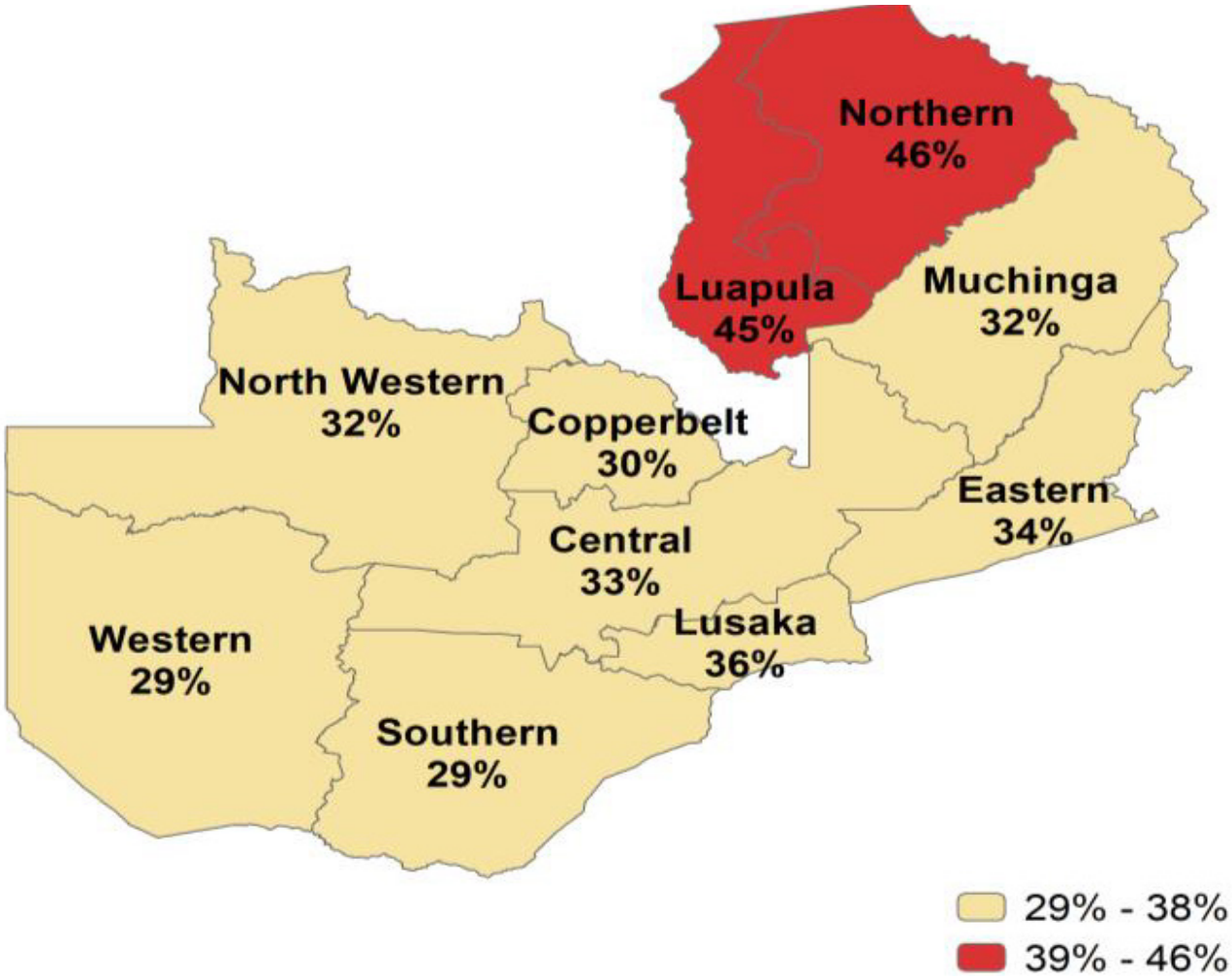
	2014	**2018**	**Difference**
Total	40	35	5%
WQ1	47	40	7%
WQ2	42	37	5%
WQ3	40	33	7%
WQ4	38	35	3%
WQ5	28	24	4%
	1.7	1.7	

The provincial results for stunting are given below. Six provinces were within the same range in both 2014 and 2018, and there was no change in Lusaka.

Table 108: Stunting by province, 2014 – 2018

	Stunting 2014	Stunting 2018	% Difference
Central	43	33	-30%
Copperbelt	36	30	-20%
Eastern	43	34	-26%
Luapula	43	45	4%
Lusaka	36	36	0%
Muchinga	44	32	-38%
Northern	49	46	-7%
North Western	37	32	-16%
Southern	37	29	-28%
Western	36	29	-24%

Figure 20: Stunting by province, 2018



The stunting geographical pattern is fixed but Lusaka is special: rates are stagnant, and it has shifted from having the lowest rates in 2014 to the third worst rates in 2018. Luapula Province saw an increase in stunting but Northern is still the worst, with almost half the children stunted. Provinces with the highest rates have the slowest reduction in stunting. Muchinga and Central provinces have seen reduction of over 30 per cent in stunting.

It is notable that the very deprived Western region (which has the highest population proportion in WQ1) is doing quite well with stunting while Luapula and Northern provinces have retained their deprived status with this indicator.

Severe stunting, however, went down significantly: from 17 to 12 per cent (this will translate into much lower mortality). Luapula and Northern are the provinces with the highest rates of severe stunting and have the lowest rates of decline for this indicator. Central and Lusaka provinces have seen falls in the levels of severe stunting. And for WQ4, the quintile into which the urban poor fall, there is a very slow decline in stunting.

Table 109: Severe stunting, rural/urban, wealth quintiles, and province, 2014 – 2018

	Severe stunting (%)		
	2014	**2018**	**% difference**
TOTAL	**17**	**12**	**-29%**
URBAN	16	10	-38%
RURAL	18	13	-28%
WQ			
WQ1	22	15	-32%
WQ2	17	13	-24%
WQ3	17	10	-41%
WQ4	16	12	-25%
WQ5	11	7	-36%
Ratio	**2.0**	**2.1**	
Central	19	14	-26%
Copperbelt	14	9	-36%
Eastern	17	11	-35%
Luapula	23	17	-26%
Lusaka	16	12	-25%
Muchinga	16	10	-38%
Northern	24	19	-21%
North Western	16	11	-31%
Southern	14	8	-43%
Western	15	8	-47%

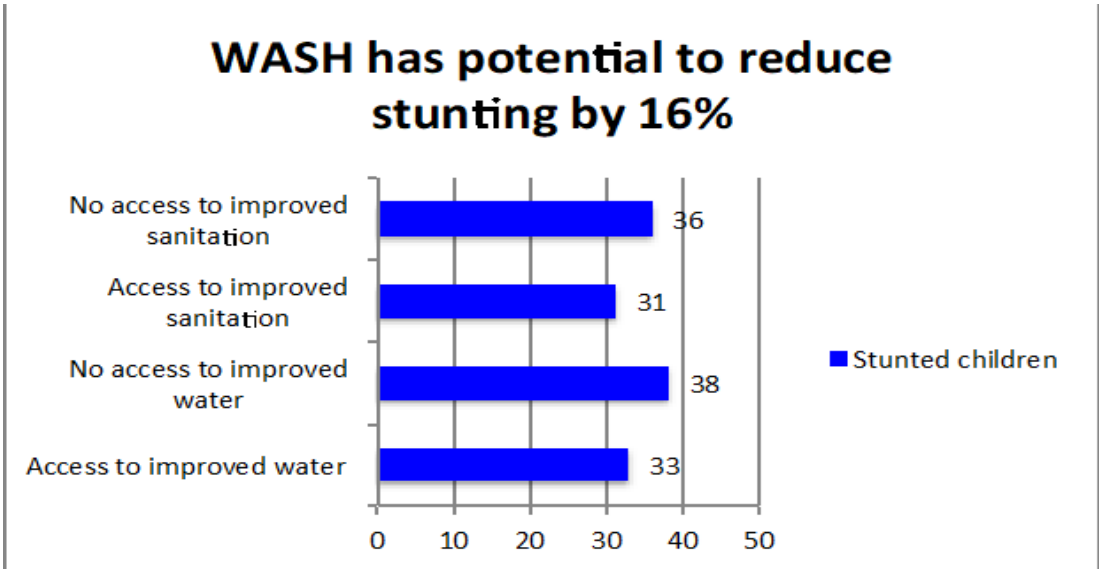
If we link stunting with access to improved water and sanitation we notice strong correlation, as shown below.

Table 110: Stunting and WASH (2018)

	Stunted children	% difference
Access to improved water	32.9	
No access to improved water	38.1	16%
Access to improved sanitation	31.2	
No access to improved sanitation	36.0	16%

Stunting is *16 per cent lower* when children have access to improved water or improved sanitation.

Figure 21: Relationship between WASH and Stunting, 2018



Basically, this is the same number we saw in the earlier analysis about the relation between WASH and prevalence of diarrhoea. What is the relation between diarrhoea and nutritional indicators? Diarrhoea is measured by incidence in the 14 days before the survey. Nutritional indicators influence diarrhoea and diarrhoea influences nutritional indicators. It is a two-way relationship.

Table 111: Stunting and diarrhoea, 2018

	No Diarrhoea	Had Diarrhoea	% Difference
Severe stunting	11.1	14.2	18%
Stunted	34	35	3%
Wasting	4.1	5.4	32%
Underweight	11.1	15.4	38%

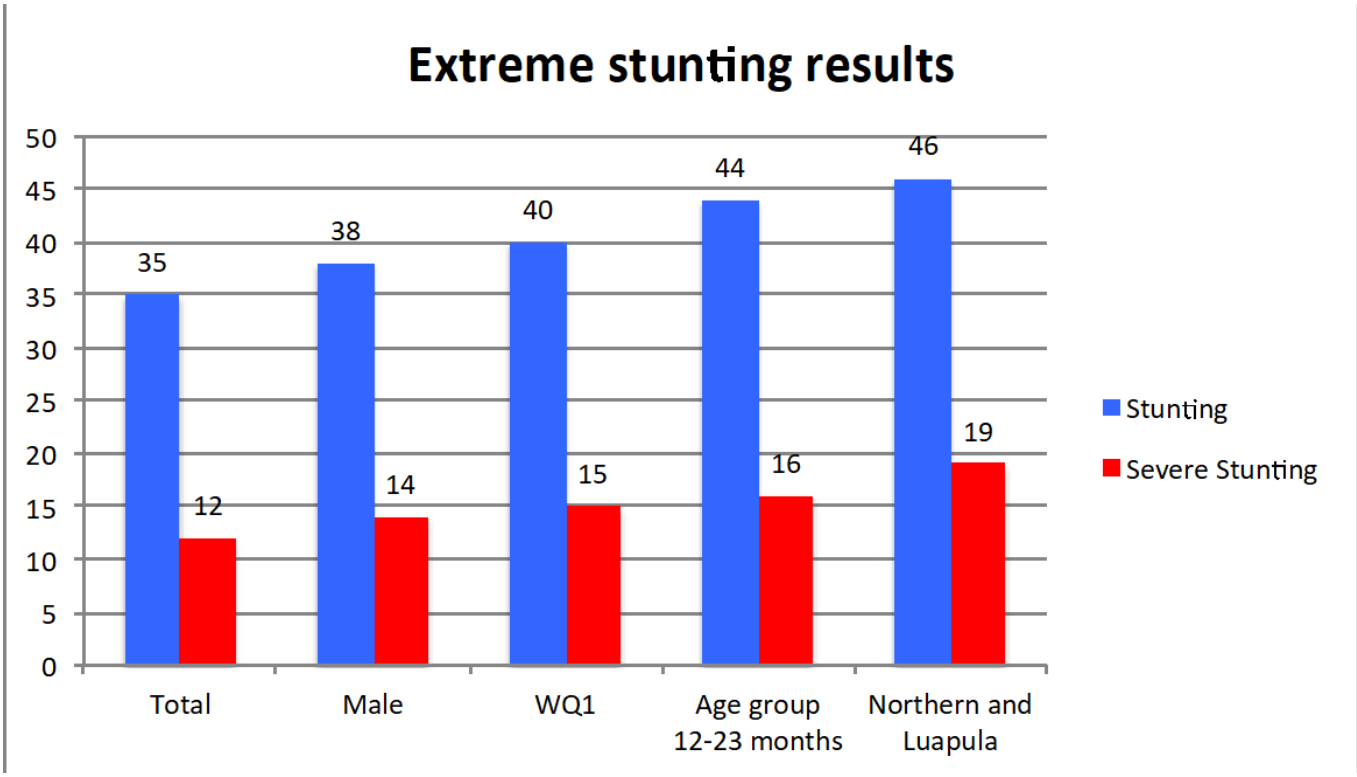
We observe a strong relation (knowing that multiple factors can coincide).

Table 112: Extreme stunting results

	Stunting	Severe Stunting
Total	**35**	**12**
Male	38	14
WQ1	40	15
Age group 12–23 months	44	16
Northern and Luapula	46	19

This shows that the country has some extreme values: stunting is 25 per cent higher in the most affected age groups and in the most affected provinces. Males have 10 per cent higher stunting than girls.

Figure 22: Extreme stunting results, 2018



The results of multiple deprivations are more modest; with sufficient cases the maximum number is a stunting level of 50, which is still very high.

When we look at the stunting figures *by wealth quintiles*, we see that in every wealth quintile urban stunting is higher than rural stunting.

Table 113: Stunting by Wealth Quintiles, 2018

Residence	Total	WQ1	WQ2	WQ3	WQ4	WQ5
Urban	32.1	66	45	35	37	25
Rural	35.9	40	36	32	29	18
Total	**34.6**	**40**	**37**	**33**	**35**	**24**

Overall, however, stunting in rural areas is higher because of the larger number in the poorest groups. At the five comparable levels of wealth, urban children suffer more stunting problems (WQ1 is even extreme).

Stunting by age group

Another interesting finding is that in the age group 18–35 months, the age group with the highest levels of stunting, differences between the first four wealth quintiles are non-existent.

Table 114: Stunting by age group, 2018

Age Group	Total	WQ1	WQ2	WQ3	WQ4	WQ5
Less than 18 months	26.7	31	27.9	25.1	28.4	18.4
18 - 35 months	43.9	45.7	47.5	42.9	46.4	33
36 - 59 months	33.4	43.2	35.4	30.9	31	22
Total	**34.6**	**40.1**	**36.6**	**32.9**	**35.3**	**23.9**

It is very interesting to note that in all four wealth quintiles almost half the children (46%) in age group 18–35 months suffer from stunting. There is no relation with wealth, except for WQ5. Thus, communication should focus on *all* children 18–35 months, in all wealth quintiles – it is a national problem, requiring a national intervention.

Overall, we notice the high stunting in age group 18–35 months is followed by a much lower level in age group 36–59 months. However, in the poorest wealth quintile the value for stunting is just slightly higher than the average, followed by a very high value for age group 36–59 months.

Table 115: Stunting and gender, wealth quintiles, 2018

Sex	Total	WQ1	WQ2	WQ3	WQ4	WQ5
Male	38.3	43	39	38	41	27
Female	31	37	34	28	30	21
Total	**34.6**	**40**	**37**	**33**	**35**	**24**

The differences between male and female levels of stunting are quite constant for urban/rural, regions and also by wealth quintiles. Interestingly, the smaller differences occur at the lower wealth quintiles while wealth quintiles 3-4-5 have the higher differences between male and female stunting.

Stunting by level of education

The data shows a strong relation between stunting and the level of education of the mother. With a mother with primary education (or below), levels are the same everywhere and the same is true for mothers with higher education. WQ4 had bad figures for stunting for mothers with secondary education.

Table 116: Stunting by level of mother's education and wealth, 2018

	Primary	Secondary	Higher
Total	38	31	15
Urban	38	32	15
Rural	38	32	16
WQ1	39	37	
WQ2	37	34	
WQ3	37	30	
WQ4	33	36	17
WQ5		23	15

Breastfeeding and diet

Breastfeeding is at a very high level in Zambia. For 2018 there was total equity as expected for the indicator percentage who started breastfeeding within one hour of birth (76). Northern Province (65) and Muchinga (70) had the lowest proportions. For babies 0–5 months, the proportion exclusively breastfed is 70 per cent.

When it comes to minimum acceptable diet (MAD) and minimum dietary diversity (MDD), the figures for rural vs. urban areas are shown below.

Table 117: MAD, Rural/Urban, 2014 – 2018

MAD	2014	2018	% Difference
TOTAL	11	13	18%
URBAN	13	18	38%
RURAL	9	9	0%

MAD is very low at 13 (18 urban and 9 rural). The increase between 2014 and 2018, however, is not statistically significant.

All provinces and wealth quintiles are similar; only WQ5, and Lusaka, show an increase. The number of cases for this indicator are too small (150 children in provinces), especially given the low results.

Table 118: MDD, rural–urban, wealth quintiles

	MDD 2014	MDD 2018	% Difference
TOTAL	***22***	***23***	***5%***
URBAN	31	37	19%
RURAL	18	17	-6%
WQ			
WQ1	15	11	-27%
WQ2	18	19	6%
WQ3	18	20	11%
WQ4	26	31	19%
WQ5	41	45	10%

For WQ1, MDD went down which is not good news from an equity perspective. And, if we look at the provinces, the richest provinces performed the best in terms of MDD.

Table 119: MDD by province, 2014 – 2018

	MDD 2014	MDD 2018
Central	15	25
Copperbelt	35	31
Eastern	15	19
Luapula	14	20
Lusaka	28	40
Muchinga	21	13
Northern	22	16
North Western	12	9
Southern	28	25
Western	17	11

Exposure to mass media

Exposure to mass media was measured as the percentage of adults aged 15–49 who reported that they read a newspaper, listened to the radio or watched television at least once a week. The 2018 report showed that such exposure is almost non-existent in Zambia outside Copperbelt (8%) and Lusaka (11%), and in the lowest quintiles exposure to mass media is 0 per cent. Exposure was 5 per cent in 2018 compared with 12 per cent in 2014 (with Copperbelt 16% and Lusaka 25% in that year).

Table 120: Exposure to mass media, 2014 – 2018

Mass media exposure	2014	2018
All 3 types of media	12	5

Internet use (a new item in the 2018 survey) was at only 12 per cent for women aged 15–49 in the month preceding the survey, and 0 per cent in WQ1 and WQ2 and 38 per cent in WQ5. The highest rate of use is in women aged 20–24 years, at 18 per cent, but among girls aged 15–19 use is only 9 per cent. Use among men is twice as high as for women and overall use is concentrated in urban areas.

Malaria

This is well covered in the DHS report, with all (positive) trends given. It is interesting that 92 per cent of nets are mass distributed and only 8 per cent purchased; and because of distribution, malaria has reverse inequity, for ownership of at least one insecticide-treated net (ITN).

Table 121: Possession of at least one ITN by wealth quintile, 2018

Possession of at least one ITN (%)				
WQ1	WQ2	WQ3	WQ4	WQ5
80	83	80	73	76

WQ4 (the urban poor) have the lowest possession of ITN, with WQ1 (rural poorest) having the highest possession. But full ITN ownership is best in WQ5 (47%) and worst in WQ1 (36%). Sleeping under bed net follows the trend for possession: WQ1 is at 61 per cent and WQ5 at 53 per cent, but fever is highest in WQ1 (20%) and lowest in WQ5 (12%), Lusaka is best at 10 per cent and Luapula worst at 30 per cent.

HIV

The HIV chapter in the report is very comprehensive and of good quality. There is no need for additional analysis; however, some interesting points to consider are discussed below.

HIV prevalence is totally the reverse of the deprivation poverty distribution:

- HIV prevalence is higher in urban areas, among the better educated, and in Copperbelt Province.
- HIV prevalence is strongly related to age: the prevalence among women aged 15–19 is 2.6 per cent and among women aged 40–44 it is 27 per cent, a ten-fold difference.
- Prevalence in Copperbelt and Lusaka is 20 per cent while Muchinga has 6 per cent prevalence.
- The breakdown of HIV prevalence by wealth quintile shows that once again the **most affected are WQ4**: the urban poor.

Table 122: HIV prevalence by wealth quintiles (% adults 15–49)

WQ	**WQ1**	**WQ2**	**WQ3**	**WQ4**	**WQ5**	**Ratio**
HIV Prevalence	7	9	13	21	17	2.5

Regarding HIV-related knowledge, the 2018 survey found that 46 per cent of men and women aged 15–49 had comprehensive knowledge of HIV.

Table 123: HIV Comprehensive knowledge

	HIV Comprehensive Knowledge	
	2014	**2018**
TOTAL	42	46

This represented a small increase over time from 42 per cent in 2014. However, the poorest WQ saw no increase in terms of comprehensive knowledge about HIV in the 2014–2018 period. This indicator is strongly connected to education and wealth: the ratio is 2.1.

Table 124: HIV Comprehensive knowledge, women, 2014 - 2018

	HIV Comprehensive knowledge, women					
	WQ1	WQ2	WQ3	WQ4	WQ5	Ratio
2014	29	30	39	46	60	2
2018	29	35	42	52	62	2.1

Table 125: HIV Comprehensive knowledge by province, 2014 – 2018

	HIV Comprehensive Knowledge		
	2014	**2018**	
Central	35	54	54%
Copperbelt	51	57	12%
Eastern	33	35	6%
Luapula	30	32	7%
Lusaka	50	54	8%
Muchinga	37	39	5%
Northern	33	39	18%
North Western	31	40	29%
Southern	59	45	-24%
Western	27	32	19%

Eastern, Luapula and Western provinces were and are the poorest performing in terms of HIV comprehensive knowledge, suggesting that further efforts are required in these provinces.

Domestic violence

The chapter on domestic violence is one of the best in the DHS. It has trends, comparisons and excellent analysis. Some further analysis of the percentage of women who had experienced physical violence within the 12 months prior to the survey gave an identical result in 2018 as compared to 2014: a high 18 per cent with no difference between urban and rural (17% compared to 18%) and hardly any difference by wealth quintiles.

Table 126: Domestic violence by wealth quintile, 2018

WQ	WQ1	WQ2	WQ3	WQ4	WQ5	Ratio
Domestic Violence	21	21	19	21	10	2.5

Four wealth quintiles have the same value; the ratio is 2 because the urban rich, the best educated, experience violence less often.

The provincial pattern has no relation with other indicators. The provinces with highest levels of violence are Muchinga and Southern, with 28 per cent and 24 per cent respectively, while Northern and Western provinces recorded the best figures in 2014 and 2018 at 8 per cent and 14 per cent, respectively.

Violence is very much related to marriage as unmarried women experience way less violence than married women (7% versus 22%).

Table 127: Percentage of women age 15-49 who have experienced physical violence since age 15 by level of education, according to background characteristics, Zambia DHS 2018

Background characteristics	No education	Primary education	Secondary education	Number
Residence				
Urban	64.2	28.4	24.8	1,678
Rural	26.4	31.5	23.1	2,118
Province				
Region 1	32.1	35.5	30.5	1289
Region 2	17.1	27.8	18.9	891
Region 3	55.2	25.1	23.6	1,616
Wealth quintile				
Poorest	22.0	30.9	21.8	721
Poorer	31.0	36.8	31.1	670
Middle	40.7	27.2	21.9	717
Richer	63.2	27.2	27.0	834
Richest	80.4	26.7	20.9	853
Total	34.5	30.7	24.1	3,795

Educational level is important but less so in the poorest quintiles.

Attitudes towards violence against women

The results for 2014 and 2018 were very similar (all other data on gender-based violence are also totally similar). In 2018, 46 per cent of women aged 15 to 49 agreed that a husband is justified in beating his wife for at least one out of the six reasons provided.

Table 128: Acceptance of violence, women aged 15 to 49, 2014 – 2018

	2014	2018
	Acceptance	Acceptance
	of violence	of violence
TOTAL	47	46
URBAN	35	37
RURAL	57	54

The younger generation (15–24) has the same (47%) value as all women age 15–49. Of those that had never married, 40 per cent agreed that a male partner/husband is justified in beating his female partner/wife, and of those that are married 50 per cent agreed.

The above indicates that young *married* women have a very high acceptance of violent behaviour (because in that age group the proportion never married is substantial). Thus young, married women need extra attention.

The difference is strong between urban and rural women and acceptance is also strongly related with WQ (ratio is 58/28=2), but the main disparities are by province: women in Northern (72%), Luapula (70%) and Muchinga (64%) are most likely to agree that a husband is justified in hitting or beating his wife for at least one specified reason. In Lusaka it is 27 per cent of women who agree to wife beating.

Table 129: Acceptance of violence by province, women 15–49, 2018

	Acceptance
Province	**of violence**
Central	41
Copperbelt	44
Eastern	38
Luapula	70
Lusaka	27
Muchinga	64
Northern	72
North Western	33
Southern	57
Western	49

A 2012 World Development Report (WDR) on Gender Equality and Development based upon estimates derived from Demographic and Health Surveys analysed the perceptions in many nations about the justifiability of wife beating. It showed that in countries with available data, the proportions of women who concurred that wife beating was justified under the three internationally considered main situations (also in Zambia) used in the study were lower than in Zambia. These results are shown in the table below.

The below table shows a comparison of reasons for acts of violence for 2012 WDR and DHS 2018 (% of women aged 15–49 who concur that reasons are justified).

Table 130: Reasons for acts of violence

Reason for act of violence	2012 WDR %	DHS 2018 %
Arguing with the husband	29	32
Refusing to have sex	25	30
Burning the food	21	21

The highest-ranking countries in the 2012 WDR study were Ethiopia, Guinea, Congo, Mali and Burkina Faso, which all had acceptance rates for acts of violence above 70 per cent. The lowest figures were for Armenia, Ukraine, Peru and Philippines with rates below 10 per cent. The average value was 45 per cent. Zambia is thus around the world average for this measure, but the figure is still worrisome.

Conclusion

The analysis of the 2018 Zambia Demographic and Health Survey (ZDHS) reveals that Zambia is making progress on some key child related outcomes, and that deserves to be highlighted. The survey results show that Zambia has achieved significant advances in mortality reduction, and improvements in crucial nutrition indicators as well as in WASH, amid a modest fertility reduction. However, major concerns still prevail in education, child protection and equity issues, among others. The urban poor show slow to no progress on all key indicators, signaling the need for further enhancement in addressing urban poverty. Of key concern is the need to address the high and stagnant rates of child marriages and child mothers which contribute significantly to high under five and maternal mortality. Investing in education, particularly by keeping girls in school longer shows high dividends of reduced under five and maternal mortality. Therefore, in recognising the positive results scored, there is need for further interventions to sustain and enhance the child related outcomes reported in the analysis. The development of the 8th National Development Plan provides an invaluable opportunity that will benefit from the results of this analysis with regards to key areas for policy prioritisation in achieving positive sustainable results for children.