Child Mortality Reduction in Sub Saharan African Countries : Progress and Challenges

1. Introduction

MDG 4 pertains to reduction of mortality rate among children under 5 by two third. Rapid improvements before 1990s gave hope that mortality rates for children under five and infants could be cut by two third in the next 25 years. Every day, 29,000 children under 5 years die from preventable diseases, resulting in 10.6 million deaths each year. The Sub Saharan African countries recorded the highest levels of Under 5 Mortality rate – 175 in 2003 and 278 in 1960. This region also recorded the highest level of infant mortality rate – 104 in 2003 and 165 in 1960.

Nearly all of the child deaths will be concentrated in the world's poorest countries in sub-Saharan Africa and South Asia. Within each country, children from the poorest families are most likely to die. About 41% of child deaths occur in sub-Saharan Africa and another 34% in South Asia.

More than half of these children – roughly 6 million – will die of diseases that could have been easily prevented or treated. About 2 million will die from diarrhoea, which in most cases can be treated with simple oral rehydration therapy. Another 2.1 million – more than those who die this year from HIV, tuberculosis, and malaria combined – will die from pneumonia. Another million will die from malaria, children who could have been protected by such simple measures as insecticide-treated bed nets or treated with available anti-malarials. And hundreds of thousands will die from measles for which there is a cheap and effective vaccine.

Given these numbers and the fact that so many lives could be saved with the implementation of such simple measures, it is surprising that child mortality has not received more attention.

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Estimates of mortality rates in children younger than 5 years in 2000 by cause are published on the WHO website, and are being revised (C Mathers). Estimates available attribute 13% of deaths to diarrhoea 19% to pneumonia, 9% to malaria, 5% to measles, 3% to AIDS, 42% to neonatal causes (birth asphyxia, low birth weight, and disorders arising in the perinatal period), and 9% to miscellaneous other causes, including non-communicable diseases and injury.

2. Objectives and Data Sources

The prime objective of this paper is to analyse the trends in Under 5 mortality rate and infant mortality rate for the Sub Saharan African region in general and for Kenya, Nigeria, South Africa, Uganda and Zimbabwe, the Sub Saharan African countries with high levels of infant and child mortality rates, in particular. For the sake of comparison, the rates for the Sub Saharan African region are also presented. The paper is based on secondary data such as Demographic Health Survey (DHS), Multiple Indicator Cluster survey (MICS), and World Development Report of the World Bank.

Specifically, Target 5 of the MDG 4 states "Reduce by two thirds, between 1990 and 2015, the under five mortality rate". The indicators used in this paper include Under 5 Mortality rate, Infant mortality rate, and Proportion of one year old children immunized against Measles.

3. Population Characteristics

Population Growth Rate

Table 1 gives the trends in population growth rate and TFR for the sub Saharan African region. The population growth rate, which peaked during 1980-1990, has dropped during 1990-2004 and the TFR recorded marginal decline during 1980-2004, which indicate the higher levels of fertility and population increase.

Table 1 Population Growth Rate – sub Saharan Africa

Population Growth Rate (%)	
1950-1980	2.6
1980-90	2.9
1990-2004	2.5
TFR	
1970	6.8
1980	6.7
2004	5.4

Table 2 gives the population growth indicators for the sub Saharan African region and the 5 countries. Of the 5 countries considered, Nigeria is the most populated country, while Zimbabwe is the least populated. The population growth is expected to decline slightly during 2004-2020 in the region, while it is expected to experience sharp decline in Zimbabwe, Nigeria and South Africa and increase in case of Uganda.

Kenya and Uganda are mostly rural, while rest of the countries are also predominantly rural. The proportion of rural population declined in case of Nigeria, South Africa and Zimbabwe. Zimbabwe has more forest area but percentage of area under forests declined during 1990-2004.

South Africa is predominantly urban with two third of the South Africans living in urban areas. In Kenya and Uganda four fifth of the population is rural Nigeria and Zimbabwe are predominantly rural with half and three fifth rural population.

Table 2 Population Characteristics

Indicator	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
Population (mn) 2004	720	33	129	46	28	13
Average population growth rate (%)						
1990-2004	2.5	2.5	2.5	1.8	3.2	1.4
2004-2020	2.2	2.5	1.9	0.3	3.7	0.6
Rural Popn (%)						
1990	72	75	65	51	89	71
2004	64	80	53	43	88	65
Forest (%)						
1990	30	7	19	8	25	58
2004	27	6	12	8	18	45

Poverty

Table 3 gives the trends in poverty indicators for the sub Saharan African region. The poverty measured in terms of proportion of population living on below $2 a day recorded fluctuations during 1981- 2002 but it increased from 73% to 75%.

Table 3 Poverty – sub Saharan Africa

Poverty (% people living on <2$ a day)	
1981	73.3
1984	76.1
1987	76.1
1990	75.0
1997	74.6
1996	75.1
1999	76.1
2002	74.9

Socio Economic Characteristics

Table 4 gives the literacy, employment and poverty indicators. Kenya has high levels of poverty in rural as well as urban areas. While Zimbabwe, Uganda and Nigeria have high levels rural poverty. Uganda and Zimbabwe have low levels of urban poverty.

The adult literacy rates are moderately high for males Zimbabwe recorded highest levels of male and female literacy. In Kenya and South Africa, female employment is more and substantial. In Uganda, the labour force participation is very low for males as well as females.

Table 4 Literacy, Employment and Poverty Indicators

Indicator	Year	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
Adult literacy rate (15+)							
Male	2002	-	78	74	-	79	94
Female	2002	-	70	59	-	59	86
Employment (%)							
Male	1990-92/2000-04	-	58	-	54	29	-
Female	1990-92/2000-04	-	71	-	79	18	-
Popn below poverty line (%)							
Rural	1997	-	53	36	-	42	48
Urban	1992-93/2002-03	-	49	30	-	12	8
Total	95-96	-	52	34	-	37	35

Fertility and Contraception Indicators

The Sub Saharan African region had high fertility in terms of CBR; with Uganda recording the highest, followed by Nigeria and Kenya; while South Africa recorded the lowest fertility. In terms of CBR, Zimbabwe followed by South Africa and Nigeria recorded the highest level of fertility. TFR declined across the Sub Saharan African countries, during 1990-2004, with the highest and lowest level of TFR being recorded in Uganda and South Africa respectively.

The sub Saharan African region recorded high level of adolescent fertility with Uganda recording the highest level followed by Nigeria.

The coverage of ante natal services varies across the countries with coverage ranging between 58% and 92%. Coverage with TT is still low across the countries. Interestingly, most of the pregnant women in Uganda and Kenya received pre-natal care services, while more than half in Nigeria received the same. One third to two fifth of the births were attended by health staff across the countries.

Zimbabwe, Kenya, Uganda and Nigeria recorded higher levels of maternal mortality ratio, while South Africa recorded low ratio Thus the maternal mortality burden is too high in the sub Saharan African region. .

The contraceptive prevalence is very low for the region including Nigeria and Uganda. Only in South Africa and Zimbabwe recorded contraceptive prevalence of above 50%.

Table 5 Fertility and Contraception Indicators

Indicator	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
CBR						
2004	40	39	41	24	50	30
TFR						
1990	6.2	5.8	6.7	3.3	7.2	5.2
2004	5.3	5.0	5.6	2.7	7.1	3.4
Adolescent Fertility rate LB/100015-19 years women						
2004	135	96	142	67	208	92
Contraceptive prevalence rate (% women15-49) 1996-2004	22	39	13	56	23	54
Pregnant women receiving pre-natal	2004	-	88	58	-	92	-

care						
% pregnant women recd TT (2004)	-	70	51	61	53	70
Births attended by skilled health staff (%)						
1989-94	41	-	31	-	38	69
2000-04	42	42	35	-	39	-
Maternal mortality ratio						
2000	921	1000	800	230	880	1100

Health Indicators

Access to improved water source increased during 1990-2002 in all the countries. South Africa and Zimbabwe recorded higher levels of access, while Kenya, Nigeria and Uganda recorded low levels of access to improved water source. Similar trends are noticed in case of access to improved sanitation facilities, but only one third had access to improved sanitation in the Sub Saharan Africa region. The rural urban differential in access to improved sanitation is very large in South Africa.

Availability of health workers seems to be a problem in the sub Saharan African region due to the fact that the health worker density index is very low across the countries. South Africa had higher per capita health expenditure, higher health worker density index; while Uganda had the lowest figures

HIV prevalence is highest in Zimbabwe, followed by South Africa, while TB incidence is high in South Africa, Zimbabwe and Kenya and low in Nigeria. TB success rate is moderately high across the countries while the DOTS detection rate is highest in South Africa and lowest in Nigeria

Table 6 Health Indicators

Indicator	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
Access to improved water source						
1990	49	45	49	83	44	77
2002	58	62	60	87	56	83
Access to improved sanitation facilities						
1990	32	42	39	63	43	49
2002	36	48	38	67	41	57
Urban						
1990	53	49	50	85	54	69
2002	55	56	48	86	53	69
Rural						
1990	24	40	33	42	41	40

2002	26	43	30	44	39	51
Health Exp. (Total % of GDP) 2003	6.1	4.3	5.0	8.4	7.3	7.9
Per capita Health exp ($) 2003	36	20	22	295	18	40
Health worker Density index						
Physicians, nurses, midwives/1000 people	-	-	1.5	4.6	0.3	0.8
HIV prevalence (% Popn 15-49)						
2002	7.2	6.7	5.4	15.6	4.1	24.6
Incidence of TB (per 100,000)						
2004	363	619	290	718	402	674
TB Treatment						
Success rate % registered cases (2003)		80	59	67	68	66
DOTS detection rate (2004)	-	46	21	83	43	42

Child Health Indicators

Child immunization coverage is high in Uganda, Zimbabwe, South Africa and Kenya and low in Nigeria, while Vitamin A supplementation coverage is also low.In all the countries, one tenth of the babies born were low birth weight babies. Exclusive breast feeding among children of <6 months is very low in South Africa, Nigeria and Kenya.

Uganda and Nigeria recorded higher levels of child malnutrition in terms of under weight as well as stunting but the levels are moderately high across the countries. In Nigeria, not even one third of the children with ARI were taken to health provider; while one fourth to one third of the children with diarrhoea received ORS, with Zimbabwe being an exception (where six received ORS). Use of bed nets by children while sleeping is very low across the countries, while one fourth to one thirds of the children received antibiotics for fever.

Table 7 Child Health Indicators

Indicator	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
Child immunisation %12-23						
Measles	64	73	35	81	91	80
DPT	64	73	25	93	87	85
Vitamin A Supplementation						
6-9 months, 2003	-	33	27	-	46	46

Low birth weight babies						
1998-2004	-	10	14	15	12	11
Exclusive breast feeding						
<6 months (1996-2004)	-	13	17	7	63	33
Child Malnutrition (%)						
Under weight	-	20	29	12	23	13
Stunting	-	30	38	25	39	27
Children with						
ARI taken to health provider (00-04)	-	46	31	-	67	-
Diarrhoea recd ORS (98-04)	-	33	28	37	29	80
Sleeping under bed nets (00-04)	-	5	1	-	0.2	-
Fever recd antibiotics	-	27	34	-	-	-

Mortality Indicators

Table 8 indicates higher levels of mortality in Zimbabwe and South Africa. The life expectancy at birth across the Sub Saharan African countries is low irrespective of gender. The life expectancy at birth declined sharply during 1990-2004 in Zimbabwe, South Africa and Kenya. Even in other countries the life expectancy at birth declined. The male –female differentials in life expectancy at birth are negligible across the countries.

Table 8 Mortality Indicators

Indicator	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
CDR						
2004	18	15	19	22	15	23
Life expectancy at birth						
1990	49	58	46	62	46	59
2004	46	48	44	45	49	37
Life Expectancy at birth, 2004						
Male		46	49	43	44	48	38
Female		47	47	44	45	49	37

4. Infant and Child Mortality

Infant Mortality

The analysis indicates variation across the region with Nigeria recording highest levels of under 5 as well as infant mortality rates- 198 and 98 respectively in 2003. The analysis presented in table 9 indicates increasing trend in the Neo-natal, post-neonatal and infant mortality in the recent past in case of Kenya and South Africa. Nigeria recorded decline in the infant mortality in recent past. In case of Zimbabwe, the infant mortality declined initially, but increased in the recent past.

During 1990- 2004, IMR declined for the sub Saharan African region as a whole and in Nigeria, and Uganda. On the other hand, IMR increased in Kenya, South Africa and Zimbabwe with the % change ranging between 20% and 50%.

Table 9 Trends in Infant Mortality Rate

Country/Period	Neonatal (NN)	Post-neonatal (PNN)	Infant mortality ($_1q_0$)
Kenya			
1993-1998	33	44	77
1988-1992	32	41	73
1983-1987	31	42	73
Nigeria			
1999-2003	48	52	100
1994-1998	59	61	120
1989-1993	55	58	113
South Africa			
1993-1998	20	25	45
1988-1992	19	20	39
1983-1987	23	28	51
Uganda/Years before survey			
0-4	33	55	88
5-9	37	54	91
10-14	36	53	89
Zimbabwe/Years before survey			
0-4	24	36	60
5-9	18	19	37
10-14	20	21	40

	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
IMR						
1990	111	64	120	45	93	53
2004	100	79	101	54	80	79
% change	-9.9	+23.4	-15.8	+20	-13.9	+49.5

Child and Under 5 Mortality

According to WHO figures, the world's average child mortality rate in the year 2000 was 67 deaths per 1000 live births – a marked improvement from 1990 when the average rate was 85 per 1000 but in Africa, the child mortality rates are running at an average rate of 150 deaths per 1000 live births, a rate eight-times than that is seen in Europe. In seven African countries – Burundi, Lesotho, Madagascar, Mauritania, Nigeria, Sierra Leone, and Tanzania – there has been little or no change in child mortality rates over the past 50 years.

Child Survival Revolution in 1982 initiative had the support of all major international organizations active in child health, as well as national and regional leaders. World Summit for Children in New York, USA, in 1990, 71 heads of state met to pledge their support. Many countries made substantial progress in reducing child mortality over the 15 years following the launch of the Child Survival Revolution: the average number of under 5 deaths fell from 117 per 1000 in 1980 to 93 per 1000 in 1990. Since the mid 1990s, however, this momentum has been lost and gains in child survival have slowed or been reversed.

Progress so far on this has been too slow in Sub Saharan Africa with the gap between the goal and reality being the greatest in this region. During 1990- 2005, the Under 5 Mortality rate for this region declined from 185 to 168 and the target is to reach a level of 62 by 2015. Every country in this region is off track.

U5MR declined for Sub Saharan Africa, Nigeria and Uganda during 1990-2004, while it increased in Kenya, South Africa and Zimbabwe. Kenya, South Africa, Uganda and Zimbabwe recorded higher male child mortality, while Nigeria recorded slightly higher male child mortality.

Sub Saharan Africa as a whole, Nigeria and South Africa recorded higher adult mortality rate for males. Kenya and Zimbabwe recorded higher adult female mortality rate. The advantage females have in terms of survival is clear from the higher survival chances of females compared to that of the males.

During 1990- 2004, U5MR declined for the sub Saharan African region as a whole besides Nigeria and Uganda. On the other hand, Kenya, South Africa and Zimbabwe experienced increase in the U5MR, with the extent of increase ranging between 12% and 61%.

Table 10 Child and Under 5 Mortality Trends

Country/Period		
	Child Mortality	Under 5 mortality
Kenya/Years before survey		
0-4	41	115
5-9	40	110
10-14	35	105
Nigeria		
1999-2003	112	201
1994-1998	132	236
1989-1993	136	234
South Africa		
1993-1998	15	59
1988-1992	16	55
1983-1987	20	70
Uganda		
0-4	69	152
5-9	80	163
10-14	82	164
Zimbabwe		
0-4	24	82
5-9	17	54
10-14	18	58

	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
Child Mortality rate						
Male	-	42	120	18	78	35
Female	-	39	123	13	70	31
Survival to 65 (% of children)						
Male	32	28	32	26	25	18
Female	36	32	36	33	28	20

	Sub Saharan Africa	Kenya	Nigeria	South Africa	Uganda	Zimbabwe
U5MR						
1990	185	97	230	60	160	80
2004	168	120	197	67	138	129
% change	-9.1	+23.7	-14.3	+11.7	-13.8	+61.3

Differentials in Child Mortality

Child Mortality by Education and Wealth Index

Rural areas recorded highest levels of neo-natal, post-neonatal, IMR, CMR and U5MR in all the countries. Similarly 'no education' group and 'lowest wealth index quintile' recorded highest levels of child and infant mortality. Thus the importance of education and economic welfare in reducing infant and child mortality gets highlighted.

Table 11 Child Mortality by Education and Wealth Index

Country	Education						Wealth Index Quintile				
Indicator	Rural	Urban	No Edu	Primary		Secondary	Lowest	Lower middle	Middle	Upper middle	Highest
				Incomplete	Complete						
Kenya											
NN	34	26	43	35	29	25	38	33	35	30	26
PNN	44	36	37	62	40	19	58	42	47	23	36
IMR	79	61	80	97	69	44	96	75	82	53	62
CMR	41	35	51	54	31	20	59	37	43	26	31
U5MR	117	93	127	145	98	63	149	109	121	77	91
Nigeria											
NN	60	37	60	-	53	37	59	70	56	48	23
PNN	61	44	64	-	58	35	74	70	54	39	30
IMR	121	81	124	-	111	71	133	140	110	87	52
CMR	139	78	166	-	85	45	143	178	118	101	29
U5MR	243	153	269	-	186	113	257	293	215	179	79
South Africa											
NN	22	16	20	25	19	18	-	-	-	-	-
PNN	30	16	39	29	22	12	-	-	-	-	-
IMR	52	33	59	54	42	30	-	-	-	-	-
CMR	20	11	27	26	15	3	-	-	-	-	-
U5MR	71	43	84	79	55	33	-	-	-	-	-
Uganda											
NN	36	23	39	-	35	25	40	33	38	35	26
PNN	57	32	68	-	54	28	66	66	56	46	34
IMR	94	55	107	-	88	53	106	98	95	81	60
CMR	77	49	90	-	72	43	96	83	76	60	49
U5MR	163	101	187	-	154	93	192	172	164	136	106
Zimbabwe											
NN	22	20	17	-	22	22	17	25	24	24	16
PNN	29	26	24	-	30	27	31	34	25	22	28
IMR	51	47	40	-	52	49	48	59	48	46	45
CMR	22	18	30	-	20	20	25	15	29	23	12
U5MR	72	64	69	-	71	68	72	73	76	68	57

Child Mortality by Fertility Behaviour

Table 12 indicates that one fifth to one third of the births are not in high risk category across the countries. Uganda and Nigeria recorded higher proportion of high risk births. Three fifth to four fifth of the currently married women belong to 'any high risk category'. The risk ratio is maximum for the multiple high risk category.

Table 12 Child Mortality by Fertility Behaviour

Country	Not in high risk category	Unavoidable risk about 1st order, 18-34 yrs	Child Mortality by Fertility Behaviour											Any avoidable high risk category
			Single high risk category					Multiple high risk category						
			<18	>34	<24M	Birth order >3	Sub Total	<18 BI<24	>34 BI<24	>34 BO>3	>34 BI>24 BO>3	BI>24 BO>3	Sub Total	
Kenya														
% of births	26	18	7	1	8	22	38	<1	0	10	2	7	19	56
Risk ratio	1.0	0.9	1.6	1.8	1.8	1.1	1.4	2.5	-	1.5	3	2	1.9	1.6
% CMR	22	5	1	3	10	16	30	<1	<1	26	4	13	43	73
Nigeria														
% of births	21	14	8	1	7	26	41	1	0	11	2	9	24	65
Risk ratio	1	1.2	1.8	1.2	1.1	1.2	1.3	1.3	1.6	1.3	2.6	2.1	1.7	1.4
% CMR	13	6	3	4	10	15	32	1	<1	27	6	15	48	80
South Africa														
% of births	32	26	7	3	5	12	27	<1	<1	10	1	3	15	42
Risk ratio	1	1.1	1.9	1.5	1.5	1	1.4	-	-	1.3	1.6	4.1	1.9	1.5
% CMR	35	5	<1	15	5	9	29	0	<1	24	3	4	31	60
Uganda														
% of birth	22	11	8	<1	9	27	44	1	-	9	2	11	23	67
Risk ratio	1	1.2	1.6	-	1.5	1.0	1.2	1.4	-	1.0	1.6	1.4	1.3	1.2
% CMR	16	5	1	3	10	21	34	1	-	20	6	18	45	79
Zimbabwe														
% of births	37	25	7	1	4	16	27	<1	0	8	<1	2	11	38
Risk ratio	1	1	1.5	1.6	2.2	1.1	1.4	7.6	-	1.0	3.7	3.5	1.9	1.5
% CMR	30	6	1	4	12	14	32	<1	<1	21	3	8	32	64

Child Mortality by Demographic Characteristics

Males recorded higher levels of infant and child mortality levels across the countries. The relationship between mother's age at birth and infant/child mortality follows U shaped curve with highest levels at younger and elder ages. The data also indicates the higher mortality risk associated for children with higher birth order and shorter previous birth interval across the countries.

Table 13 Child Mortality by Demographic Characteristics

Country	Sex of child		Mother's age at birth				Birth order				Previous birth interval				Birth size	
	M	F	<20	20-29	30-39	40-49	1	2-3	4-6	7+	<2	2	3	4+	S	Av
Kenya																
NN	36	29	34	31	32	75	35	28	28	51	57	22	28	21	63	40
PNN	47	38	45	40	45	57	27	42	48	61	97	40	32	38	40	43
IMR	84	67	79	75	76	132	62	69	77	112	134	62	60	59	103	68
CMR	42	39	41	36	46	89	29	34	42	93	56	49	38	25	-	-
Nigeria																
NN	60	46	58	48	55	95	59	40	51	73	79	49	32	30	67	42
PNN	56	56	65	52	57	50	47	54	58	65	81	62	31	31	72	43
IMR	116	102	123	100	113	145	106	94	109	137	160	111	63	61	139	86
CMR	120	122	143	114	112	188	105	105	128	152	174	134	75	59	NA	NA
U5MR	222	212	248	203	212	306	201	189	223	269	307	230	134	116	NA	NA
South Africa																
NN	24	15	20	19	18	18	19	15	23	31	35	18	14	-	-	-
PNN	25	21	22	21	24	56	21	18	27	60	42	20	20	-	-	-
IMR	49	35	43	40	43	75	41	33	50	91	77	39	34	-	-	-
CMR	18	13	19	15	13	30	15	14	20	7	26	14	13	-	-	-
U5MR	66	48	61	55	55	103	55	47	69	80	101	52	47	-	-	-
Uganda																
NN	37	32	42	30	38	40	48	26	30	45	49	23	20	25	45	28
PNN	56	53	63	52	53	50	62	53	51	54	77	44	36	41	53	56
IMR	93	85	105	82	91	90	111	79	82	99	126	67	56	66	98	84
CMR	77	70	82	72	69	82	74	76	74	68	89	73	63	48	-	-
U5MR	164	149	179	148	154	164	176	149	150	160	203	135	116	111	-	-
Zimbabwe																
NN	23	19	18	20	24	42	21	17	25	39	58	16	17	18	42	19
PNN	28	29	30	28	27	30	26	29	31	25	60	28	24	22	41	36
IMR	51	48	48	48	51	73	47	46	55	65	118	44	40	40	83	35
CMR	21	21	23	21	22	5	20	23	20	16	27	24	16	22	-	-
U5MR	71	68	70	68	72	77	66	68	74	80	142	66	56	60	-	-

Child Mortality by Province/Region

The results presented in Table 14 indicate wide ranging differentials in infant and child mortality by region/province across the countries.

Table 14 Child Mortality by Demographic Characteristics

Country/Province/Region	NN	PNN	IMR	CMR	U5MR
Kenya					
Nairobi	32	35	67	30	95
Central	27	17	44	10	54
Coast	45	33	78	41	116
Eastern	32	24	56	21	84
Nyanzu	27	106	133	84	206
Rest Valley	37	25	61	17	77
Western	25	54	80	70	144
North Eastern	50	41	91	79	163
Nigeria					
North Central	53	49	103	70	165
North East	61	65	125	154	260
North West	55	59	114	176	269
South East	34	32	66	40	103
South South	53	68	120	63	176
South West	39	30	69	47	113
South Africa (Region)					
Western Cafe	4	4	8	5	13
Eastern Cafe	25	37	61	21	81
Northern Cafe	21	21	42	14	56
FRC State	10	27	37	14	50
KWO Zulu-Na	23	29	52	24	75
North West	20	17	37	9	45
Ganteng	18	19	36	9	45
Mpumdanga	24	24	47	17	64
Northern	18	19	37	16	52
Uganda (Region)					
Central	30	42	72	68	135
Eastern	30	60	89	64	147
Northern	42	64	106	81	178
Zimbabwe (Province)					
Manicaband	38	33	71	32	100
Mashondang Central	15	30	45	29	73
Mashondang East	27	20	47	25	71
Mashondang West	17	39	56	23	77
Matuberland North	11	35	46	22	67

Matuberland South	12	20	32	14	45
Midlands	28	25	53	13	65
Masxingo	15	27	42	17	58
Harare	24	22	46	20	65
Bulawago	5	29	34	11	45

6. Progress in Achievement of MDG 4

Mortality of children under the age of five remains unacceptably high in many developing countries. A special edition of the Bulletin of the World Health Organization (WHO, 2000) stressed this point and noted that 10.5 million children still die each year. In Lopez's (2000) introductory comments to the WHO Bulletin, he emphasizes that child mortality needs to remain the focus of public policy to protect the gains in child survival from new threats such as HIV/AIDS.

Although initially there was controversy over whether childhood mortality levels were reversing direction (i.e. increasing), this phenomenon has been proven in a number of countries, primarily in sub-Saharan Africa. Some researchers thought that the increase was only a blip in the data and did not necessarily indicate a trend change (Ahmad et al., 2000). However, others found evidence of increasing childhood mortality due primarily to the increasing prevalence of AIDS in the population (Hill et al., 2001; Claeson et al., 2000; and Adetunji, 2000).

Rapid improvements prior to 1990 provided hope that mortality rates for infants as well as under five could be cut by two third in the next 25 years. But progress slowed down in 1990s. Progress on MDG 4 lags behind all other goals as progress made has been insufficient to reach the MDG target, which requires an annual decline of 4.3% over the entire period. But only East Asia and Latin America and the Caribbean are close to achieving the MDG target. The U5MR for sub Saharan Africa declined from 185 in 1990 to 108 in 2005 while it is expected to reach 62 by 2015. The gap between goal and reality is greatest in Sub Saharan Africa. Progress in Sub Saharan Africa has been slow where civil disturbances and HIV/AIDS epidemic have driven up infant and child mortality rates. As of 2005, no Sub Saharan African country was on the track to achieve the MDG target. This becomes crucial due to the fact that the sub Saharan Africa accounts for two fifth of the under five deaths.

The Average Annual Reduction Rate (AARR) of U5MR declined from 1.3% in 1990 to 0.3% in 1990-2002. In 18 countries of the region (Angola, Botswana, Burundi, Cameroon, Central African Republic, Cote d' Ivorie, Democratic Republic of Congo, Kenya, Liberia, Mauritania, Rwanda, Sao Tome and Principle, Somalia, South Africa, Swaziland, United Republic of Tanzania, Zambia and Zimbabwe) the U5MR remained same or risen since 1990.

Though poor perinatal conditions still contribute to infant mortality, infections and diseases are the main killers of under five. HIV/AIDS is responsible for 8% of all the under five deaths in the region, two times the global average.

The U5MR in most of the sub Saharan African countries appear to be less affected by household wealth than in other developing regions, which is explained by high levels of absolute poverty in these countries which in turn get translated in to lack of adequate and essential services at household level and lack of infrastructure and basic resources. Children born in to poorest 20% of the population are 1.7 times more likely to die before reaching 5 yrs than the wealthiest 20% with an excess U5MR of 80 deaths per thousand live births- 181 vs 100.

Country specific discussion is given below :

Kenya

Kenya is most unlikely to meet the MDG 4 besides MDG for poverty reduction, gender equality, fighting AIDS, improving maternal health. Kenya remains firmly in the bottom quartile of the Human Development Index rankings with about three fifth of the population surviving on less than $2 per day. Progress towards attaining universal primary education is encouraging, mainly due to the initiatives such as free primary education. Poverty remains as a challenge for Kenya, as 23% of population lives on less than $ 1 a day and 58% live on less than $2 a day. Paucity of immunisation vaccine against curable diseases also contributed to increase in Child mortality. In 2005, the Kenyan Government main streamed the MDGs into national budgeting and planning process and funding was increased, but this seems to be insufficient due to the enormity of the problem. Kenya lacks robust food production and is vulnerable to unstable rain patterns.

Kenya suffered a massive human and economic loss from HIV/AIDS and associated with this, rate of Tuberculosis has increased in recent years. Over half of the hospital beds are occupied by patients with HIV/AIDS related infections. Malaria is the main cause of deaths of under five children, while only one fourth are protected by bednets.

Poor economic growth coupled with an uneven distribution of wealth emerge as major reasons for the country's dismal record in terms of MDG. This is evident from the fact that the richest 10% of population control almost half of the nation's wealth, while the poorest 10% control only 1%.

Nigeria

Nigeria, world's 8th largest oil exporter is in the bottom quartile of the Human Development Index and over 70% of its population survives on less than $1 a day. According to Action Aid, one third of its population is hungry in spite of adequate food production. Health status of the people remains to be poor due to higher levels of infant, child and maternal mortality. Poor access to improved sources of drinking water is another concern. Budget shortfalls also add to this (per capita government spending on health in Nigeria is one of the lowest in Africa). This results in severe shortage of health workers with most trained staff emigrating for economic and social reasons.

Though HIV prevalence has reduced to just below 4%, it still has about 1 million AIDS orphans and 3 million people living with HIV. Disbeliefs regarding polio vaccination led to serious problem for international efforts to eradicate polio and resulting in fresh outbreaks of the same.

The National Economic Empowerment and Development Strategy and the subsidiary version of the strategy set out by the states could not yield the expected results due to poor coordination of the development plans.

Nigeria has three major ethnic groups with different languages and religions but there are about 250 ethnic groups, many suffering from poverty and exclusion from land and other rights.

South Africa

South Africa is a middle income country as per UN classification with rich resources and most developed country in Africa. MDGs for education are about to be achieved with universal access to primary schools and higher enrolment of girls than boys. The efforts of the Government yielded results towards gender equality and the extensive social security system, unique in Africa in terms of its reach, also proved to be useful. However, its effectiveness is debated due to the administrative short comings.

The latest UN Human Development Report shows that proportion of people below $1 and $2 a day is almost identical the figures for 2000 indicating stagnation. Poverty is also Reflected in high unemployment rate with majority of the unemployed from black communities. The country has the higher wealth inequality in the World.

South Africa has highest number of people living with HIV/AIDS and home to 1.2 million orphans. The country also receives large number of illegal immigrants who more often face hostility and resentment. South Africa recorded one of the highest levels of violent crime in the world.

Uganda

Uganda presents success as well as failure in its progress towards MDGs. The country's achievement of MDG targets pertaining to HIV/AIDS and equality in elementary education is laudable. But infant and maternal mortality rates are cause for concern besides higher levels of absolute poverty. The impact of higher population growth rate on economic progress and social services is affecting the progress towards the MDG targets and population reduction is a challenge for Uganda.

The conflict in the Northern Uganda is a challenge for poverty reduction measures as this region is mostly closed to the aid agencies though the region lags behind in terms of literacy, economic well being and food security.

HIV/AIDS is still a challenge in Uganda as the latest WHO figures published in 2006 indicate a small increase in prevalence there by affecting the progress towards a key MDG target.

Zimbabwe

Zimbabwe seems unlikely to meet the MDGs , particularly poverty and child mortality. Over 56% of the population survives on less than $1 per day, almost two times the figure recorded in the baseline year 1990. More than one third of the population is not able to meet the basic household food needs. Though MDG for HIV/AIDS is feasible, child mortality is following increasing trend and this needs attention. Though pro poverty economic plans have been implemented, absence of stable economy and limited international donor support may emerge as constraints. As per UN World Food Programme, 3 million people needed food aid in 2006 and thus interventions may focus on short term survival and stability.

Though HIV prevalence has reduced, it has taken a huge toll in human terms with 1.3 million children orphans. The intensity of the problem is highlighted by the fact that 70% of hospital beds are occupied by patients suffering from AIDS related illness.

Concluding Remarks

Numerous causes have been cited for the reversal or stagnation of child survival. Adetunji (2000) concludes that not all of the stagnation in child mortality levels can be directly attributed to the prevalence of HIV/AIDS. The resurgence of malaria and lower levels of vaccination coverage and health care utilization have also contributed to the reversal of child survival trends (Rutstein, 2000). Deteriorating health systems have resulted in fewer children being vaccinated against childhood diseases, and thus increases or stagnation in mortality levels have occurred. Recent data from two states in India (Rajasthan and Arunachal Pradesh) show stagnation of child mortality coinciding with

lower vaccination coverage between 1992 and 1998 (Claeson et al., 2000; IIPS 1995; and IIPS and ORC Macro, 2000).

Sub Saharan Africa faces the greatest challenge in meeting MDG4, which involves raising its Average Annual Rate of Reduction to 8.2, almost double the rate originally required so as to meet the target by 2015.MDG 4 set each country the task of reducing under five mortality by two third between 1990 and 2015.

Attention must be paid to the following aspects:

- Provide access to essential services for the children and families missing out
- Children who are beyond the reach of laws, budgets, programmes, research and often the Governments, organisations and individuals seeking to fulfill their rights and thus face exclusion need special attention
- Implement the Quick Impact Initiatives, outlined in the 2005 report of the Millennium Project, endorsed by the World leaders at the 2005 World summit
- Long term initiatives rooted in human rights based approach to development must be stepped up or launched as immediate intervention
- Need deeper approaches to child development with special attention to the most vulnerable children
- Socio economic development must be given due importance as spelt out in the MDGs due to its influential role in reduction of child mortality
- In view of the regional differentials, region/province specific strategies must be formulated and implemented

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