

Statistical Bulletin

Tanzania: Health

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Measuring Service Delivery in Southern Africa Project

Study 3: Developing measures and methods for measuring progress towards service delivery targets

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Progress towards health goals

Key targets and indicators from the MDG (which are also contained in the RISDP) have been clustered to review progress in the health sector in the four countries included in the study: Tanzania, Botswana, Malawi and South Africa. These include the quality of service in the health sector that are measured by skilled attendance at birth and a wide range of outcome indicators such as infant and child mortality rates.

The following Goals from the MDG are included:

- Goal 4: Reduce child mortality;
- Goal 5: Improve maternal health;
- Goal 6: Combat HIV/AIDS, malaria and other diseases.

The figure below illustrates progress made towards goals related to the health sector and health outcomes drawn from the Millennium Development Goals.

Table 1. Tanzania Health MDGs

Goal 4: Reduce child mortality	Target 4.1 Children <5 mortality rate	
Goal 5: Improve maternal health	Target 5.1 Maternal mortality ratio	
	Target 5.2 Births Attended by Skilled Health Staff	
Goal 6: Combat HIV/AIDS, malaria and other diseases	Target 6.1 HIV Prevalence Rate (15-49 years old)	
	Target 6.6 Reported Cases of Malaria	
	Target 6.9 Tuberculosis prevalence rate	

KEY	
0	No Progress in meeting target (0/10)
5	Some progress but will not meet MDG target (5/10)
10	Target will be met in 2015 (10/10)

In addition the Human Development Index (HDI) and Life Expectancy are also reviewed. Projections from the data available on each of the six targets reveal that in relation to two of these targets, maternal mortality ratio and births attended by skilled health staff, no progress being made. The other four targets have shown some progress but not at a sufficient pace to reach the target by 2015.

In summary, on the basis of the projections of present trends, none of the three MDGs relating to health and the health sector will be met by 2015.

Country political and socio-economic context

Tanzania is a very poor country with 35.7 per cent of the population in 2000/01 living below the basic needs poverty line which is a level amongst the highest in the world.

Tanzania has historically had the reputation for setting ambitious social development plans and programmes aimed at the eradication of poverty, ignorance and disease since independence in 1961. There has, however been a decided turn. The provision of low-cost or free services, for example, has not been able to be sustained even with the self-help efforts of the people and generous donor countries. The inadequate economic base has forced Tanzania to abandon its path towards the vision of a form of African socialism.

Following the period of austerity there are new prospects for positive achievements in service delivery, especially in primary and secondary education. Debt relief, because of the commitment to abide by conditionalities, has also increased the funds available for basic services.

Public participation and civil society engagement

Public, private and community actors have joined efforts and mobilised resources to improve the delivery and quality of basic services such as water and sanitation, education and healthcare. However, the role of the state, including local government, especially in resources mobilisation, facilitation, and creation of an appropriate environment, and coordinating and monitoring service delivery remains dominant.

Health and human development

This bulletin reviews the progress made in selected indicators of health services and health outcomes in Tanzania. To achieve cross-country comparability indicators commonly available and which are being captured in the Millennium Development Goals (MDG) are used, although not all related indicators for each country are available. These are then related to the goals and objectives set out in the MDG and the Regional Indicative Sustainable Development Plan (RISDP). This study begins with an overall sense of human development and then examines the range of health indicators available.

The Human Development Index (HDI) has emerged as an attempt to put people back at the centre of development discussions and action plans. It has the advantage of being a simple composite measure to evaluate both economic development and improvements in human well-being. The HDI includes the following:

- Life expectancy at birth, as an index of population health and longevity;

- Knowledge and education, as measured by the adult literacy rate (with two-thirds weighting) and the combined primary, secondary, and tertiary gross enrollment ratio (with one-third weighting); and
- Standard of living, as represented by gross domestic product per capita at purchasing power parity.

Figure 1. Human Development Index for Tanzania, 1990-2007

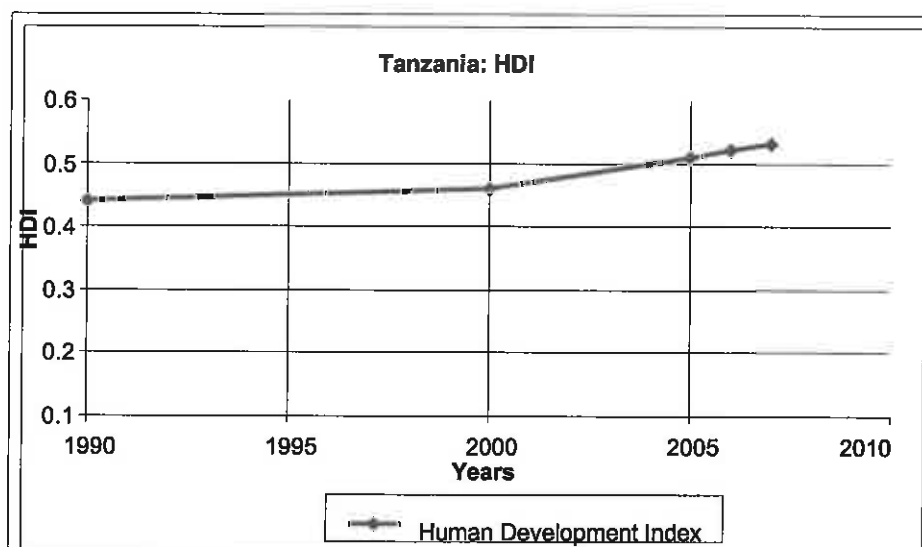


Table 2. Tanzanian HDI, 1990-2007

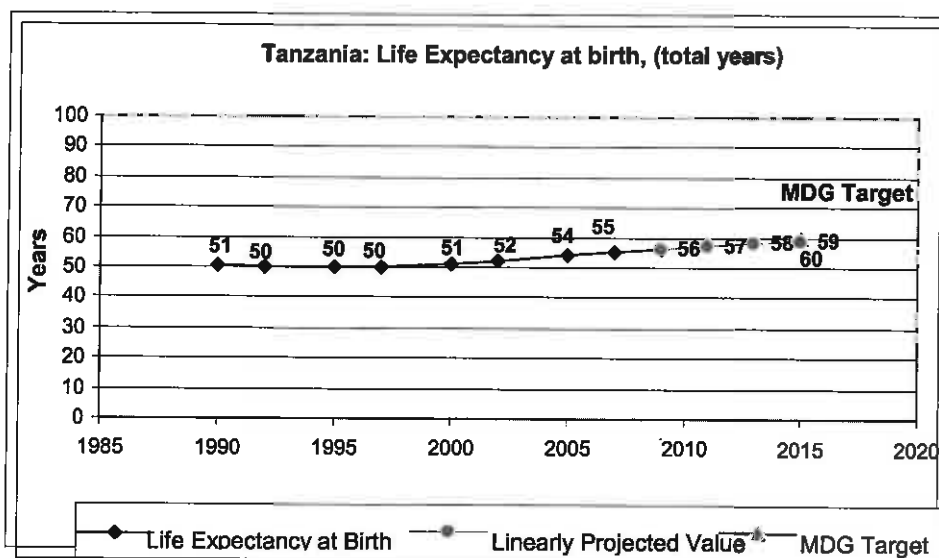
	1990	2000	2005	2006	2007
Tanzania	0.44	0.46	0.51	0.52	0.53

Source: Human Development Reports, 2009

The HDI has gained widespread international recognition as an indicator of social progress. No development index (other than, perhaps, Gross Domestic Product per capita) has been used so extensively - or effectively, in discussions and developmental planning as the HDI.

Although the trend of the HDI in Tanzania is moving upwards, this appears to have a slow momentum. There appears to be evidence of better use of existing resources rather than the reallocation of greater resources from economic growth.

The upward direction of the HDI might be due to some improvements in some aspects of livelihood, which in turn have improved the living standard. Access to health facilities, increased economic growth, urbanization (with improved access to social services), etc. are reasons for the improvement in livelihood aspects. Increased level of knowledge and education amongst members of society might be another reason as to why the HDI has a steady increment.

Figure 2. Life Expectancy**Table 3. Life Expectancy**

	1990	1992	1995	1997	2000	2002	2005	2007
Life Expectancy at Birth	51	50	50	50	51	52	54	55

Life expectancy is a component of the HDI and Tanzania shows slow incremental increase over the recent period. The trend is in the right direction and projections show that life expectancy could rise to 59 years or just short of 60 years, which is regarded as an international benchmark, by 2015.

Health indicators

There are a limited range of reliable indicators directly measuring health services across Southern African countries although there are more indicators of broad outcomes, such as infant mortality. The outcome indicators provide evidence of broad progress over the entire range of services directed towards human development including health services examined here, as well as other resources beyond these – such as housing. In a very broad sense these are key indicators of human development, which are measured (among other factors) in terms of longevity and health.

Maternal, infant / child mortality and life expectancy

The Millennium Development Goals and the RISDP identify child and maternal health as key indicators of potential improvement in human development. The indicators are fully aligned in infant or child, and the proportion of reduction sought.

Goals in infant/child and maternal mortality and life expectancy

Selected MDGs and Indicators
Goal 4, Target 5: Reduce child mortality. Reduce by two thirds the mortality rate among children under five.
Goal 5, Target 6: Improve maternal health. Reduce by three quarters the maternal mortality ratio.

Child mortality rate

The MDG seeks to reduce the mortality rate among children under five by two thirds by 2015.

Figure 3. Children under five mortality rate in Tanzania

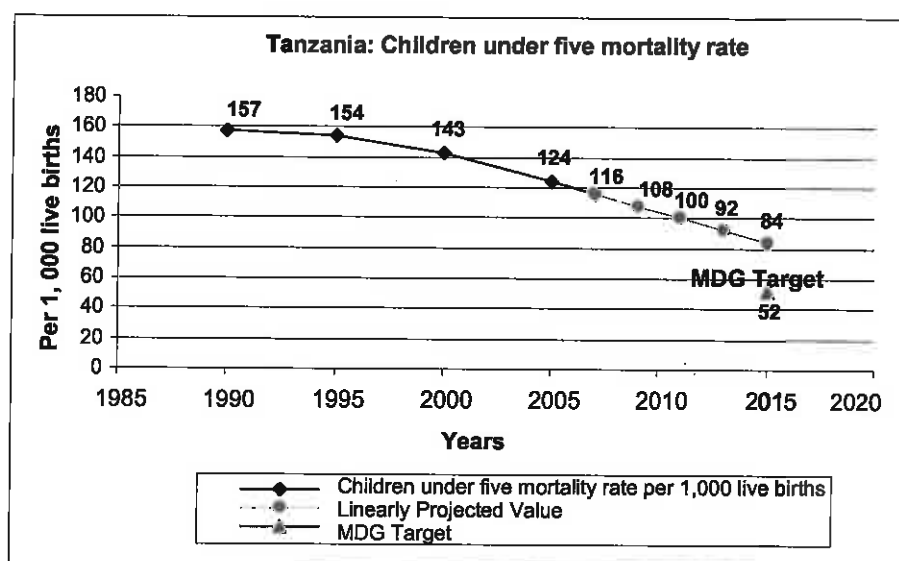


Table 4. Child mortality rates by year

	1990	1995	2000	2005	2007	2015
Children under five mortality rate per 1,000 live births	157	154	143	124	116	
MDG Target $=(157*2/3)-157$						52

Source: Millennium Development Progress Report, Tanzania, 2006.

URL: <http://www.tz.undp.org/docs/MDGprogressreport.pdf>

Analysis and comment:

MDG target is to reduce child mortality rates by two thirds; this presents a target of 52 per 1,000 live births in Tanzania by 2015. The projection of the data from 2007 does, however, indicate that at the current pace of change the under five mortality rate in 2015 will be 84 per 1 000 births as shown in Figure 3 and will not reach the target of 52 per 1 000 births. However, the persistent decline in the under five mortality rate from 1990 to 2007 appears set to continue.

The reason for this decline can be attributed to the following:

- Steps that the government has taken for health systems improvement through the adjustment of policies and strategies;
- There is more resources (funding) directed to the health sector;
- The scaling up of programmes in response to malaria and other diseases; and
- Greater availability of medicines.

Maternal Mortality Rate

The MDG target in relation to the maternal mortality ratio is to reduce the rate by three-quarters between 1990 and 2015.

Figure 4. Maternal Mortality Ratio in Tanzania

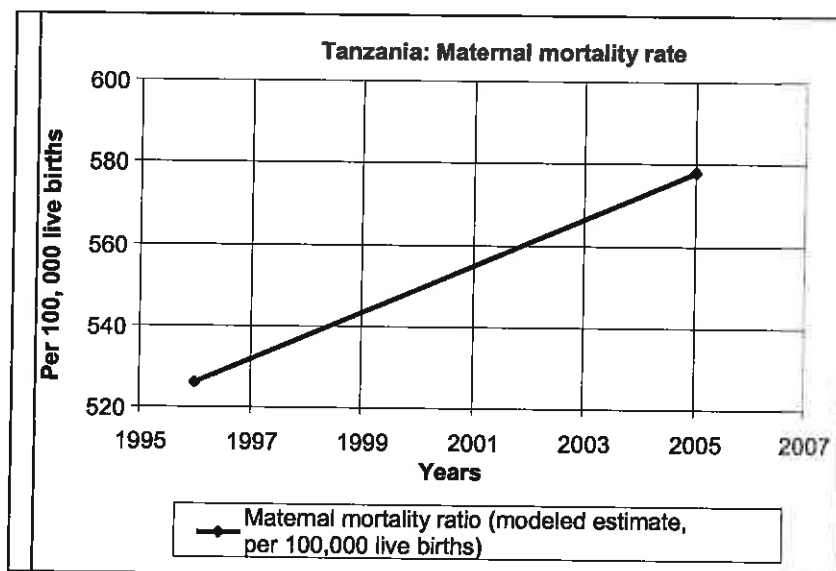


Table 5. Maternal mortality ratio by year

	1996	2005
Maternal mortality ratio (modeled estimate, per 100,000 live births)	526	578

Source: Millennium Development Progress Report, Tanzania, 2006.
URL: <http://www.tz.undp.org/docs/MDGprogressreport.pdf>

Analysis and comment:

The maternal mortality rate is widely regarded as one of the most difficult measures to establish (and potentially inaccurate). Dedicated studies in which the health records of mothers after delivery are tracked are required.

The statistics over the period 1996-2005 do not necessarily indicate a significant change with an increase in maternal mortality. Since there are only two data points a projection could not be made confidently. However, the current trend would indicate the rate would increase rather than decline. Unless there are extraordinary changes taking place currently it is most unlikely that the trend will change and that maternal mortality will be reduced

by two-thirds over the period 1990 – 2015. However, the current situation based on the available data shows that no progress is being made towards this target.

The available reports from the Ministry of Health and Social Welfare suggest that the main causes of maternal deaths in 2006 were post partum haemorrhage which accounted for 11.5 percent of the total deaths. This was followed by anemia (11.2 percent), malaria (9.4 percent) and puerperial sepsis (8.5 percent). HIV/AIDS was responsible for (5.5 percent) of the total deaths and other unspecified reasons caused 27.8 percent of the deaths.¹ The increased maternal mortality rate, especially in rural areas might be due to distance to health centers and the fact that a significant number of women deliver at home under the care of unskilled personnel.

The following figure shows the trend in terms of births attended by skilled staff.

Figure 5. Births Attended by Skilled Health Staff

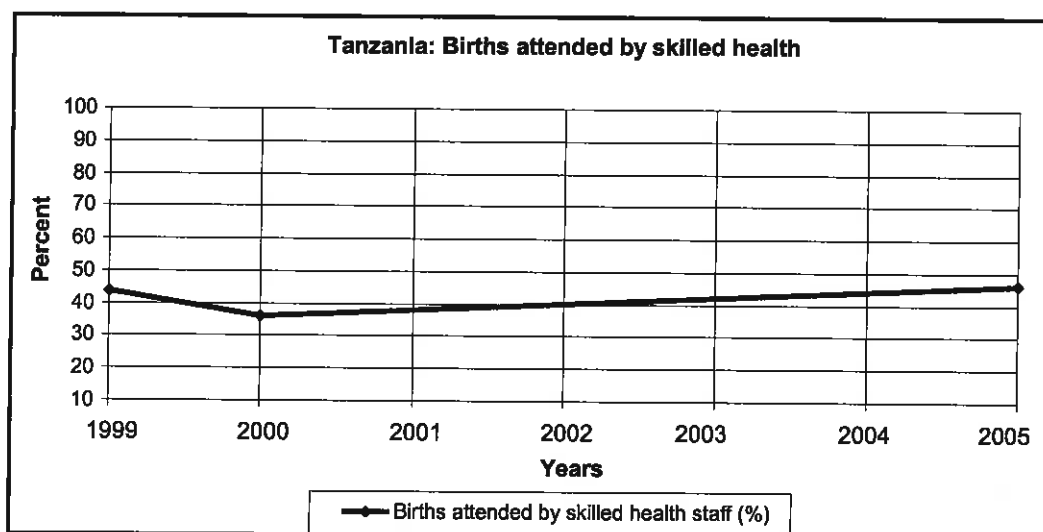


Table 6. Births attended by skilled Health Staff

	1999	2000	2005
Births attended by skilled health staff (% of total)	44	36	46

Source: World Development Indicators

URL: <http://ddp-ext.worldbank.org/ext/DDPOO/report.do?method=showReport>

The MDG sets the target of all births being attended by skilled health staff by 2015. There had been a drop in births attended to by skilled staff from 1999 to 2000. However, the proportion of births being attended to by skilled health staff has thereafter risen very slowly from 44 percent to 46 percent in the period 2000 to 2004.

¹ Ministry of Health and Social Welfare. April 2008. The National Road Map Strategic Plan. To Accelerate Reduction of Maternal, Newborn and Child Deaths in Tanzania, 2008 – 2015, p8.

At this rate the MDG in births attended by skilled health staff is very unlikely to be met despite reports that investment in human resources is increasing.

Goals on specific diseases

The MDGs that highlight the following questions on universal access, reversing the spread of HIV/AIDS, malaria, and tuberculosis are set out in Table 7, below.

Table 7. Selected MDG Health Specific Goals and Indicators

Goal 6, Target 6a: Halt and begin to reverse the spread of HIV/AIDS.
Goal 6, Target 6c. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

In the following section on progress towards universal access and the reduction of HIV/AIDS, malaria and tuberculosis are reviewed.

Reduction in HIV/AIDS

Figure 6. HIV Prevalence Rate for adult ages 15-49

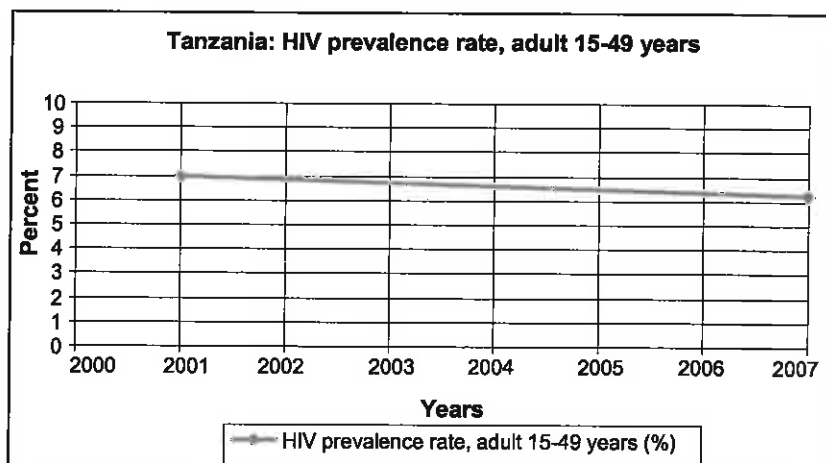


Table 8. Prevalence over the years of HIV/AIDS as a proportion of the population

	2001	2007
HIV prevalence rate, adult 15-49 years (%)	7	6.2

Source: Millennium Development Goals Indicators

URL: <http://millenniumindicators.un.org/unsd/mdg/Data.aspx>

Analysis and comment:

In Tanzania there has been a slight reduction in the HIV prevalence rate among those 15-39 years old between 2001 and 2007.

The percent of prevalence of HIV / AIDS has declined further in recent years due to increased awareness among members of the community and greater use of condoms. Counseling and testing have also helped to reduce the prevalence rate because people have opted to change their sexual behavior after knowing their status.

The other reason is due to HIV&AIDS policy in Tanzania that places more emphasis on prevention. Emphasis is also being directed at HIV&AIDS care and mitigation processes such as through the use of ARVs. The government has brought on board Non-State Actors (NSAs) including Faith Based Organizations (FBOs) in the fight against HIV&AIDS. The strategic plan for HIV&AIDS has been further developed with support from Development Partners. Scaling up the availability of ARVs to the needy is another measure being taken by the government.

Despite counseling and testing there are still a significant number of young women and men who have not attended such services. Another reason for both young women, men, children and infants non attendance may be due to poor record management and coordination, especially in rural areas where there is no or not sufficient infrastructure. However, according to the Annual Health Statistics of 2008, released by the Ministry of Health and Social Welfare, about 5.6 percent (439) of the Aids cases reported in 2005 were below 15 years of age. Most of these are likely to have acquired infection through mother to child transmission. The age group 20-49 years remained the most affected for both sexes, an observation that has remained consistent for several years since the inception of the epidemic in the country.

There has been a slight reduction in the HIV prevalence rate among those aged 15-49 years between 2001 and 2007 from 7.0 percent to 6.2 percent. Data for earlier periods are not available to show a trend over a period of time or to make projections confidently. The MDG target to halt and reduce HIV/AIDS; refers to firstly, reducing new infections to insignificance and secondly, as reducing HIV/AIDS as significantly reducing the level of existing infections. These two issues are closely associated. Data on infections among younger groups i.e. 15-24 would also help establish the pattern of disease.

In Tanzania the level of new infections among younger groups are not reported, however the level of infection is declining slightly. In conclusion it can be stated that the trend in the MDG target of halting and beginning to reverse the spread of HIV&AIDS is in the right direction, but that the target will not be reached.

Malaria

Malaria has been described as one of the major contributors to infant and adult mortality in Africa. Despite this, assembled estimates of malaria-specific mortality rates from different sites in Africa vary enormously. The MDG set out a target of halting and reversing the incidence of malaria by 2015.

Figure 7. Malaria prevalence rate

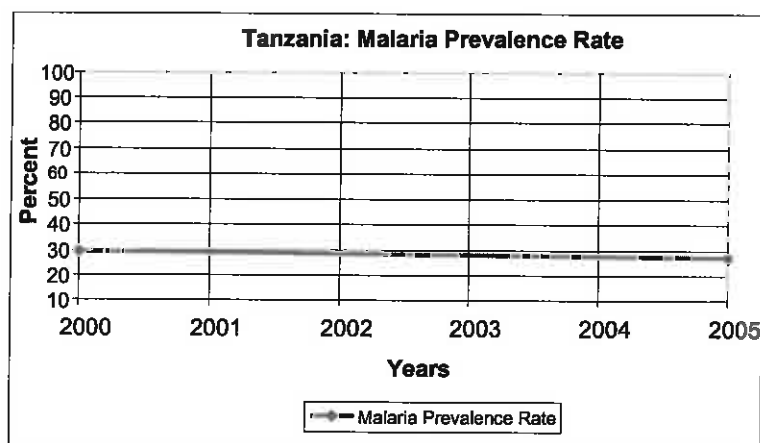


Table 9. Malaria Prevalence Rate

	2000	2005
Malaria Prevalence Rate	29.1	27.0

Source: Millennium Development Progress Report, Tanzania, 2006.

URL: <http://www.tz.undp.org/docs/MDGprogressreport.pdf>

Analysis and comment:

There has been a slight decline in the Malaria prevalence rate for the period 2000-2005. However, in some areas of Tanzania there have recently been more decisive declines in the incidence of this disease. In relation to the MDG it cannot yet be said that the course of malaria has declined and been reversed.

The burden of malaria at the Out-Patient Departments (OPD) and Inpatient departments remained high in all age groups for the past four years. Although there recently appears to have been a decline in deaths from malaria, the use of less effective drugs, delays in seeking medical assistance and reliance in clinical judgment are inhibiting greater progress. These are the main areas of focus for improvement.

Malaria continues to pose a high burden in both social and economic terms leading to low productivity. It is the leading cause of death in all age groups except for children under-five years, where it ranks sixth among top ten causes of deaths. The situation differs between urban and rural areas, with the latter suffering more. The challenges include the following:

- High cost of malaria treatment;
- Increasing resistance to cheap anti-malarial drugs such as chloroquine and sulfadoxine pyrimethamine that leads to frequent change of malaria treatment guidelines to expensive Artemisinin-based combination therapy;
- A high prevalence of HIV&AIDS that increases prevalence of other diseases, such as malaria, especially in rural areas;
- Rural areas are affected by access to mosquito nets and affordability of malaria treatment.

Some of the quick Impact Interventions are subsidizing costs of prevention and treatment, minimising the spread of HIV&AIDS and increasing household incomes to improve affordability of malaria treatment for the poor.

Tuberculosis

The MDG Target 6c is to halt and reverse the prevalence rates and death rates from tuberculosis by 2015.

Figure 8. Tuberculosis prevalence rate per 100, 000 population

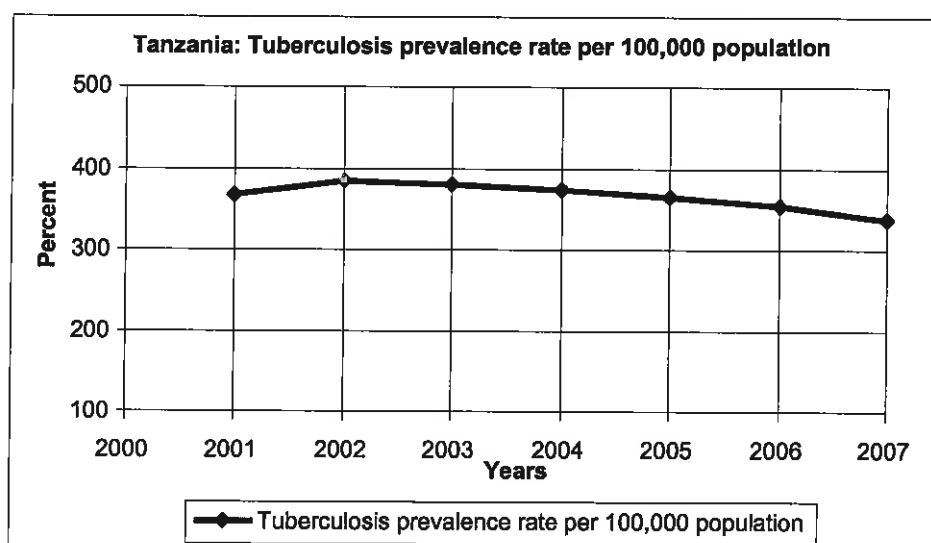


Table 10. Prevalence over the years of tuberculosis as a proportion of the population

	2001	2002	2003	2004	2005	2006	2007
Tuberculosis prevalence rate per 100,000 population	366.6	383.4	380.1	372.8	364.5	352.9	336.8

Source: Millennium Development Goals Indicators

URL: <http://millenniumindicators.un.org/unsd/mdg/Data.aspx>

The data presented in Figure 8 above, shows an increase in the prevalence of tuberculosis from 2001 and 2002; thereafter there has been a persistent but slow decline in tuberculosis in the period since 2002 to 2007, which amounts to 12 percent over the whole period. The rate of decrease over the more recent period of five years (2002-2007) appears slower than in the earlier period of 2001-2002. Data for the year 1990 is unknown, which means that the trajectory for the prevalence could not be modeled over the whole period.

Analysis and comment:

Tuberculosis management is based on the Directly Observed Treatment Short (DOTS) course which has a high success rate in reducing TB. The decrease in TB prevalence is also equated to an increase in awareness among the community members due to various campaigns conducted by the government and NGOs. The implementation of collaborative TB/HIV activities was further adopted since 2005. This initiative, apart from increasing awareness also strengthened treatment for TB patients which in turn reduced the spread of the disease. The campaign was implemented hand in hand with the expansion of health centers which provide counseling and testing as well as treatment for both TB and HIV/AIDS patients.

From the data available the conclusion drawn is that Target 6c of halting and reversing the incidence of tuberculosis has not been achieved and is unlikely to be achieved by 2015, unless there is a high level intervention. Although the trend is in the right direction the rate of decline in the prevalence rate is slowing – further and speedier progress would have to be evident to draw the conclusion that the disease is “halted” and “reversed”.

The trend is in the right direction but insufficient progress is being made to achieve this target by 2015.

Appendix 1

Table 11. MDG targets related to health

Health	Health	Potential	Additional indicators
1	Target 4a: Reduce by two thirds the mortality rate among children under five	10	Human Development Index
2	Target 4.2 Infant mortality rate reduce by two thirds	10	Life expectancy
3	Target 5a: Reduce by three quarters the maternal mortality ratio	10	
4	Target 5.2 Births attended by skilled health personnel	10	
5	Target 6a: Halt and begin to reverse the spread of HIV/AIDS	10	
6	Target 6c: Halt and begin to reverse the incidence of malaria and other major diseases	10	
7	Target 6.9 Tuberculosis prevalence rate	10	

Definitions:

1. Children (under five) Mortality Rate

The under-five mortality rate (U5MR) is the probability (expressed as a rate per 1,000 live births) of a child born in a specified year dying before reaching the age of five if subject to current age-specific mortality rates.

A live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life—such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles—whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered a live birth.

Source: Millennium Development Goals Indicators

[URL: http://millenniumindicators.un.org/unsd/mdg/Metadata.aspx?IndicatorId=14&SeriesId=0](http://millenniumindicators.un.org/unsd/mdg/Metadata.aspx?IndicatorId=14&SeriesId=0)

2. Children with fever receiving anti malarial drugs

Percentage of children aged 0-59 months with fever in the two weeks prior to the survey received any anti-malarial medicine.

Source: Millennium Development Goals Indicators

URL: <http://unstats.un.org/unsd/mdg/Metadata.aspx?IndicatorId=0&SeriesId=646>

3. Infant Mortality Rate

The infant mortality rate is the probability (expressed as a rate per 1,000 live births) of a child born in a specified year dying before reaching the age of one if subject to current age-specific mortality rates.

A live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life—such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles—whether or not the umbilical cord has been cut or the placenta is attached. Each product of such a birth is considered a live birth.

Source: Millennium Development Goals Indicators

URL: <http://millenniumindicators.un.org/unsd/mdg/Metadata.aspx?IndicatorId=14&SeriesId=0>

4. Life Expectancy

Life expectancy at birth is the average number of years a newborn infant would be expected to live if health and living conditions at the time of its birth remained the same throughout its life. It reflects the health of a country's people and the quality of care they receive when they are sick.

Source: The World Bank Group

URL: <http://www.worldbank.org/depweb/english/modules/social/life/index.html>

5. Maternal Mortality Ratio

The maternal mortality ratio (MMR) is the annual number of female deaths from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, for a specified year (expressed per 100,000 live births).

Source: Millennium Development Goals Indicators

[URL:http://millenniumindicators.un.org/unsd/mdg/Metadata.aspx?IndicatorId=14&SeriesId=0](http://millenniumindicators.un.org/unsd/mdg/Metadata.aspx?IndicatorId=14&SeriesId=0)

6. Prevalence Rate for Malaria

Prevalence of malaria is the number of cases of malaria per 100,000 people. Death rates associated with malaria refers to the number of deaths caused by malaria per 100,000 people.

Source: Millennium Development Goals

URL: <http://www.mdgasiapacific.org/node/43>

7. Prevalence Rate for HIV adults (15-49)

An estimate of the percentage of adults (aged 15-49) living with HIV/AIDS. The adult prevalence rate is calculated by dividing the estimated number of adults living with HIV/AIDS at yearend by the total adult population at yearend.

Source: NationMaster

URL: http://www.nationmaster.com/graph/hea_hiv_aid_adu_pre_rat-hiv-aids-adult-prevalence-rate

8. Proportion of births attended by skilled health personnel

Births attended by skilled health staff are the percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period, to conduct deliveries on their own, and to care for the newborns.

Source: The World Bank Group

URL:<http://extfeeds.worldbank.org/extfeedbuilder/ContentMdk?mdk=21543411&source=DEC&format=HTML>

9. Tuberculosis Prevalence Rate

Tuberculosis prevalence refers to the number of cases of TB (all forms) in a population at a given point in time (sometimes referred to as "point prevalence"). It is expressed as the number of cases per 100,000 population. Estimates include cases of TB in people with HIV. TB is an infectious bacterial disease caused by *Mycobacterium tuberculosis*, which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of people with the active respiratory disease. In healthy people, infection with *Mycobacterium tuberculosis* often causes no symptoms, since the person's immune system acts to "wall off" the bacteria. The symptoms of active TB of the lung

are coughing, sometimes with sputum or blood, chest pains, weakness, weight loss, fever and night sweats. Tuberculosis is treatable with a six-month course of antibiotics.

Human Immunodeficiency Virus (HIV) is a virus that weakens the immune system, ultimately leading to AIDS, the acquired immunodeficiency syndrome. HIV destroys the body's ability to fight off infection and disease, which can ultimately lead to death.

Source: Millennium Development Goals Indicators

URL: <http://mdgs.un.org/unsd/mdg/Metadata.aspx?IndicatorId=0&SeriesId=617>