Achieving the Health MDGs in the African Region

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THE CHALLENGES OF ACHIEVING THE HEALTH MDGs IN THE AFRICAN REGION

During the last decade the World Health Organization Regional Office for Africa has published the *African Health Monitor* twice a year. The Monitor has strived to present to its readers the overall strategic approaches of WHO Secretariat’s actions in support to Member States and the most significant achievements resulting from both those actions and countries’ efforts.

The year 2000 Millennium Declaration and the Millennium Development Goals (MDGs) represent the most important commitment and set of development objectives for the world, particularly in the area of health. Indeed, six of the eight MDGs deal with health to a greater or lesser extent, with three (MDGs 4, 5 and 6) focusing exclusively on health and a further three on specific aspects of health (underweight children, water and sanitation and essential medicines).

In 2008, the African countries adopted the Ouagadougou Declaration, the Algiers Declaration and the Libreville Declaration. Countries thus committed themselves to strengthen their health systems using the Primary Health Care approach; to strengthen their research for health, health information and knowledge management systems; and to take the necessary steps for effectively addressing the impact of the environment on health. The WHO Secretariat vowed to support Member States in their efforts according to its mandate, particularly by providing guidance and monitoring health situation and trends.

Readers will notice that we are welcoming the New Year with a new beginning – I am pleased to introduce this issue of the improved *African Health Monitor*. Some features have remained the same, others have changed.

The Monitor continues to be produced by the staff members of the World Health Organization’s Regional Office for Africa, including those in Intercountry Support Teams, and WHO Country Offices throughout the Region. The focus is still on keeping the thousands of readers of this magazine throughout the world informed about recent developments and the evolution of activities in closing the knowledge gap in order to strengthen health systems and services and better deliver health to African populations.

This special issue of the *African Health Monitor* focuses on the MDGs: progress or challenges. Some papers discuss ways of strengthening the monitoring of progress on the health-related MDGs in the African Region. Others analyse the challenges in achieving the health MDGs in specific areas, such as monitoring implementation of child survival strategies, eliminating measles from the African Region, improving women’s health, accelerating HIV prevention and control, malaria elimination, and the emergence of drug resistance to drugs used against HIV, tuberculosis and malaria.

The changes we have introduced will gradually become evident. The most obvious is that we have redesigned the *Monitor* to make it more contemporary and lively. We have also instituted a peer review system to help boost the quality of articles. And we have converted the *Monitor* into a quarterly publication.

This magazine is a result of a collaborative effort, not only on the part of the editors and production personnel, but also the authors, who generally work as a team, collaborating on a paper relating to their work. Occasionally the co-authors may include non-WHO experts in the Region or elsewhere, who bring their specialized knowledge to bear on issues of significant Regional concern.

Finally, there is a new regular feature presenting the *Communicable Diseases Epidemiological Report*. While the present issue focuses on data and preparations for the H1N1 pandemic in the African Region, future issues will provide different feature articles, along with a regular epidemiological surveillance report on selected priority diseases.

The *African Health Monitor* can only continue to serve its purpose by the active participation of the staff (by submitting or reviewing papers) and readers (by sending their comments). Thus, I invite WHO staff members in the Region and all those interested in the magazine to submit their manuscripts.

We hope you will find this magazine of direct practical use and interest and welcome your comments and feedback.

Luis Gomes Sambo
Regional Director
There is an emerging view that progress on achieving the Millennium Development Goals (MDGs) in the African Region may be better than what is currently being reflected by official statistics. This is believed to be a result of the lack of recently updated data on the MDGs in the Region. In order to strengthen the monitoring of the MDGs, it is important to look for viable options for the timely collection, processing, analysis of relevant and quality data, and the dissemination of information products based on this data. It is essential to improve the institutional capacities in countries in order to overcome the weak data sources and data management. The monitoring of progress on the MDGs could be strengthened by: improving the content, frequency, quality and efficiency of national health surveys; strengthening birth and death registration and cause of death ascertainment; improving the availability of demographic data by completing the 2010 census round; improving surveillance and service statistics; enhancing the monitoring of health systems strengthening; and, strengthening country analytical and evaluation capacity, and data use for decision-making. The latter requires the establishment and strengthening of national health observatories charged with health statistics analysis, synthesis, dissemination, sharing, and use of information and evidence.
At the mid-point towards the 2015 target date, countries in the African Region have increased coverage of key interventions aimed at achieving the MDGs. Despite these successes, progress towards the achievement of the health-MDGs remain slow and huge challenges remain. It is projected that unless the current trends are changed dramatically, the African Region is unlikely to achieve the health-related MDGs.

The MDGs are associated with measurable indicators of progress and an institutionalized system of reporting. However, the increased focus on tracking progress has drawn attention to a number of interrelated challenges, and to the underlying weaknesses of country health information systems upon which reliable monitoring depends. In order to address this problem, it is important to look for viable options for the timely collection, processing, analysis of relevant and quality data, and the dissemination of information products based on this data.

ISSUES AND CHALLENGES

INFREQUENT HOUSEHOLD SURVEYS

Given the weakness of civil registration in the Region and infrequent censuses, population-based surveys are the single most important source of population health information. In actual fact, 17 of the 23 health-related MDG indicators can be generated through household surveys. Between 1985 and 2007 a total of 211 household surveys were conducted in the Region of which 121 were conducted after 2000. The number of surveys has increased over the years, reaching a peak of 50 during 2002–2004 alone. The number of surveys per country has also been increasing. It is highest in the Western African subregion, followed by the Southern/Eastern African and the Central African subregion (Figure 1). Despite this increasing trend and heavy reliance on household surveys for many health indicators, national surveys have been conducted on average only once every 3–5 years. The frequency is often too low to allow close monitoring of MDG progress of several indicators. Moreover, data emanating from household surveys are inevitably subject to margins of uncertainty with the result that apparent changes between surveys may not be statistically significant.

The most commonly applied survey instrument in the Region is the USAID-supported Demographic and Health Survey (DHS). Since 1985, over 98 DHS have been conducted. The second most common survey instrument is the UNICEF-supported Multiple Indicator Cluster Survey (MICS). More than 58 such surveys have been carried out since 1995. In recent years, a number of disease-focused surveys (such as the Malaria or AIDS Indicator Surveys) have been undertaken. In addition to these internationally sponsored surveys, many countries conduct their own surveys. Most of national household survey timing and objectives are largely driven by funding agencies. Because the focus is on international data needs and cross-country comparability, such survey programmes are sometimes perceived as burdens on already over-stretched national health information systems. In addition, externally funded household surveys may neglect major health data needs of countries. However, household surveys are one of the few data sources able to generate data on inequities between population groups.
INADEQUATE COVERAGE OF BIRTH AND DEATHS REGISTRATION

Data on births, deaths, and causes of death (i.e. evidence for progress in attaining key MDGs on levels and causes of mortality) are poor in the majority of countries of the Region, where vital events go unregistered and causes of death remain poorly understood. Of the 46 countries of the region, only four have mortality registration coverage rate of 75% or higher. Vital registration is used to estimate under-five mortality rate for Algeria, Seychelles and South Africa (Figure 2). Coverage of birth registration is 75% or higher in only nine countries of the Region. In many settings, available data from civil registration systems that could provide important (albeit incomplete) information are not compiled and analyzed.

In the absence of functional civil registration systems, data on births and deaths can be generated through alternative strategies such as demographic surveillance. A number of demographic surveillance sites have come together to form INDEPTH.1 This is an international platform of sentinel, longitudinal demographic and health surveillance sites that provides health and demographic data and research. INDEPTH has 38 demographic surveillance sites in 19 different countries. Of these sites, 26 are in Africa. Enumeration of births and deaths is a key aspect of demographic surveillance, but the data are largely used for research purposes and are generally not considered integral to the national HIS. However, one extremely important output of these sites was the publication of model life tables for Sub-Saharan Africa based on the mortality data gathered in these sites in the course of 1995–1999.2

INFREQUENT AND INADEQUATELY PROCESSED CENSUSES

Census data cannot be considered a substitute for reliable, comprehensive and ongoing birth and death statistics from civil registers but are particularly valuable in most countries of the Region where birth or death registration is incomplete. The available data shows that four
countries have not conducted a national census in the past twenty years, and three countries conducted only one census over the period. Most countries of the Region however have a decennial census program (Figure 3). Experience from a number of countries indicates that whereas support for conducting the census is generally forthcoming, there remain major gaps in technical support for subsequent data cleaning, analysis, projections and dissemination.

**WEAK HEALTH MANAGEMENT INFORMATION SYSTEMS**

All countries routinely collect data from health facilities and assemble and report them in annual (or bi-annual or five-yearly) health statistical abstracts or reports. Such information is often described as the health management information system (HMIS). Several disease-specific information systems have benefited from intensive technical quality control and financial inputs, such as outbreak disease surveillance, eradication programmes (e.g. polio), TB, HIV/AIDS and immunization. Despite the volume and variety of data generated through the routine health management information system, the information is systematically under analyzed and under utilized for
monitoring of MDGs, planning and programme reviews. Completeness, timeliness and quality of reporting are often described as problematic and the data are inevitably biased because they relate only to the populations using public health services and improving access to these services constitutes an ongoing challenge, as does capturing data from the private sector. Furthermore, information technology solutions have been introduced in a piecemeal manner resulting in multiple, incompatible systems in countries and the parallel existence of databases that are not interoperable.4

INADEQUATE MONITORING OF HEALTH SYSTEMS STRENGTHENING

The slow progress on MDGs has been attributed to weak health systems, the human resources for health crisis, and persisting inequities in access to interventions that could keep people alive and well. Thus, tracking health system performance and evaluating the impact of health programmes on health outcomes in the context of scaling-up and the MDGs have become important priorities.5 However, few countries carry out regular national health accounts studies and data on financial flows and expenditures are limited, especially at district level; data on the extent to which people are unable to use health services due to financial constraints and on the degree of financial risk protection are collected and reported in a minority of countries, and even then, only intermittently; data on the availability and distribution of health facilities and the health workforce are often incomplete, inaccurate and out of date; few countries have systems that can monitor the service delivery or the availability of essential medicines, equipment and supplies; data on population access to essential services, especially at sub-national or district level is limited.

Multiple actors are involved in improving monitoring aspects of the health system resources, including health financing (e.g. World Bank, WHO, UNAIDS, USAID), human resources, infrastructure, access to drugs and service delivery (e.g. WHO, USAID, JICA). However, such investments have been limited and sporadic with the result that few countries are able to monitor the basic information about the inputs and outputs of their health systems.

WEAK COUNTRY CAPACITY FOR DATA MANAGEMENT

Data management comprises a set of procedures for the collection, storage, analysis, and distribution of data. Accurate and complete data are a fundamental prerequisite. Once data have been collected, a sound management approach is essential. This includes the development of a metadata dictionary, and sound data storage procedures with a well-designed logical structure that permits data retrieval and comprehensive analysis.

The recent assessment of national health information systems in 14 countries of the African Region6 has revealed that data management is not adequate in most countries indicating that countries do not have clear procedures for the collection, storage, analysis, and distribution of data, including a centralized data depository. In many countries, more than one agency is involved in collecting and disseminating information, and each uses different methods and approaches. Ministries of health gather data through their administrative reporting systems, whereas central statistical offices generally focus on population-based data. Differences in sources and methods mean that data obtained from administrative records and data from surveys are not directly comparable.

Health workers at a local level are often overburdened with excessive data and reporting demands owing to multiple and often poorly coordinated...
systems with a large number of uncoordinated forms to fill. A major problem is the lack of standardization and alignment within and between reporting forms.

There are thus six challenges that need to be addressed to overcome the weak data sources and capacity on data management. These include how to:

1. improve the content, frequency, quality and efficiency of national health surveys;
2. strengthen birth and death registration and cause of death ascertainment;
3. improve availability of demographic data and statistics on the health workforce by completing the 2010 census round;
4. improve surveillance and service statistics;
5. enhance monitoring of health systems strengthening; and,
6. strengthen country analytical and evaluation capacity, and data use for decision-making.

THE WAY FORWARD

It is essential to improve monitoring of MDG indicators by strengthening national health surveys, particularly by promoting the development and implementation of country health survey plans with at least two surveys every 5 years.

The surveys need to have module driven contents with periodicity for specific indicators calibrated to achieve adequate sensitivity, efficiency, and relevance to country needs. In addition, innovative methods are needed to be able to generate sound population-based data at sub-national and district levels.

There is a need to improve mortality and fertility data by strengthening birth and death registration by scaling up efforts to improve vital events registration, including cause of death, in countries. This could be achieved through increased coordination, technical support and funding by relevant country and global stakeholders. The health sector has particular responsibilities for reliable cause of death ascertainment for deaths that occur in health facilities. Where deaths occur outside health facilities, the use of verbal autopsy techniques can help fill critical gaps in cause of death data.

It is also important to improve demographic data by strengthening the census platform. This will need the promotion and support the 2010 Round of Censuses, including ongoing support for data analysis, small area and temporal projections and dissemination.

There is also need to improve surveillance and coverage monitoring by strengthening facility reporting systems. This requires identifying the core information needs and appropriate incentives for improved management for results at local, national and global levels. It will also require the improvement of data quality and timeliness, supported by the introduction of information technology.

Improving the monitoring of health systems strengthening by promoting regular National Health Accounts with improved systems to monitor country expenditure is also required. Moreover, developing a comprehensive, district-based monitoring system for facilities, health workers, access to medicines, and provision of key health interventions is required. WHO has developed a toolkit to assist the monitoring health systems strengthening that combines better synthesis and
analysis of available data coupled with facility assessments to fill important data gaps.

Strengthening country capacity for analysis, synthesis, validation and use of health data is also essential for strengthened monitoring of the MDGs. This requires the establishment and strengthening of an institutionalized country mechanism (a national health observatory) charged with health statistics analysis, synthesis and quality assessment of data from population, clinical and administrative sources. Such a mechanism could be quasi autonomous or independent, but working closely with Ministry of Health and national statistical office.

Improvement in the monitoring of country progress towards the MDGs would also benefit from by establishing and strengthening an African Health Observatory (currently in formation). The Observatory will need to build on existing data, collaborate closely with partners, including the WHO Global Health Observatory, and issue analytical reports and country profiles through special publications and an integrated web portal.

Regional and global partners can contribute to the improving of the monitoring of the MDGs by doing the following:

I. INCREASING INVESTMENT IN COUNTRY DATA SOURCES AND SYSTEMS BY: committing a significant proportion of their resources to investments in country health information systems, including monitoring performance, evaluation and operational research (a ballpark figure is 5–10% of the investment);

II. WORKING TOGETHER TO ENHANCE QUALITY AND TRANSPARENCY OF STATISTICS BY: enhancing access to data and interoperability of databases; better coordination and collaboration between the various expert groups; and

III. HARMONIZING MONITORING AND EVALUATION WORK BY: regional and country level coordination of evaluation work in countries, in line with the principles of the common evaluation framework; minimizing the reporting burden on countries by improved coordination between and within agencies and investment in capacity strengthening alongside evaluation

Strengthening the monitoring of health-related MDGs in all countries is possible if countries continue sustaining high-level political commitments and work with development partners towards strengthening their health information system.

ACKNOWLEDGEMENTS

We gratefully acknowledge the comments and suggestions on an earlier version of this paper received from colleagues from WHO Headquarters, particularly Ties Boerma and Yohannes Kinfu. We also acknowledge the contributions of all those professionals at the country level who are involved in data collection, processing and dissemination. Assessment of progress on MDGs would not have been possible without their crucial efforts.

REFERENCES

4 WHO. Improving the monitoring of progress and evaluation of the MDGs. Paper presented by H8 focal point on statistics for H8 meeting, July 2008.
7 An IHP+ common evaluation strategic framework has been developed with a set of principles to maximize country and international benefits, in line with the Paris Declaration on aid effectiveness. The general principles are collective action, alignment with country planning and reporting cycles, balance between independence and country ownership, use of internationally accepted methods and standards, strengthening health information systems and appropriate timely investment in evaluation.
Progress towards the achievement of the health-related MDGs in the African Region is slow. Currently six African countries are on track to achieve the MDG target of reducing child mortality. There is no progress on the MDG target on reducing maternal mortality. Eleven countries have started to observe declines or stabilization in HIV prevalence trends among the 13 countries that have complete trend data. A third of the population with advanced HIV infection had access to antiretroviral drugs in 2007. There were increases in the proportions of children under five sleeping under insecticide treated bednets between 1999 and 2006 in all 18 countries with trend data, although coverage rates were lower than 50%. Few countries have shown sufficient progress on targets related to reducing hunger, use of improved water and sanitation facilities. Countries and their partners should increase resources significantly to strengthen health systems; maternal and child health services; combat HIV/AIDS, malaria, and TB; tackle the broader determinants of health. Measures to monitor country progress towards the MDGs should also be improved by a major effort at strengthening data sources and capacity for data management.
In 2000, world leaders adopted the United Nations Millennium Declaration and the millennium development goals (MDGs), setting the year 2015 as the date for reaching the targets.

The MDGs constituted an unprecedented commitment by world leaders to comprehensively address peace, security, development, human rights and fundamental freedoms. Three of the eight MDGs are health goals: they are Goal 4, Reduce child mortality; Goal 5, Improve maternal health; and Goal 6, Combat HIV/AIDS, malaria and other diseases. Several other MDGs are monitored through health-related indicators; they include Goal 1, Eradicate poverty and hunger; Goal 7, Ensure environmental sustainability; and Goal 8, Develop a global partnership for development.

Significant commitments to the MDGs have been demonstrated by countries of the WHO African Region. Examples of these commitments include the Abuja Declaration of 2001 requesting countries to allocate 15% of public expenditures to the health sector; the 2005 WHO Regional Committee for Africa resolution on achieving the millennium development goals;\(^1\) and the 2008 Ouagadougou Declaration on Primary Health Care and Health Systems in Africa.\(^2\) Similar commitments have been demonstrated by development partners through the United Nations Secretary-General’s MDGs Africa Initiative and the Harmonization for Health in Africa mechanism.

### ASSESSING PROGRESS

The analysis of progress is based on data from the UN Statistical Division (UNSD) and data from World Health Statistics\(^3\) when not available in UNSD. It focuses on agreed MDG targets and indicators. Trends are assessed on the basis of data between 1990 and the most recent year for which information was available as of July 2009.\(^4\) UN Member States earlier agreed to use the UNSD statistical database\(^5\) to monitor country progress towards reaching the MDGs.

## HEALTH MDGs

**TARGET 4A**

Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.

The African Region has the highest under-five mortality rate compared to other WHO Regions (Figures 1a). Six countries are on track to achieve this target (Algeria, Cape Verde, Eritrea, Malawi, Mauritius and Seychelles); 23 countries are making progress, although it is insufficient; and 16 countries have made no progress. In 2006, the mortality rate varied between 16 and 262 per 1000 live births (Figures 1b).

**Figure 1a: Under Five Mortality Rate per 1,000 live births, WHO Regions**

<table>
<thead>
<tr>
<th>Region</th>
<th>Year 2007</th>
<th>Year 1990</th>
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<td>African Region</td>
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<td>Eastern Mediterranean</td>
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<td>GLOBAL</td>
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### Figure 1b: Under Five Mortality Rate per 1,000 live births, countries of the African Region

<table>
<thead>
<tr>
<th>Country</th>
<th>Year 2007</th>
<th>MDG Target 2015</th>
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<td>African Region</td>
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<td>Seychelles</td>
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Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.

MMR estimates for 2005 show that the Region has made no progress towards achieving this target. A total of 13 countries had maternal mortality ratios less than 550 deaths per 100,000 live births; 31 countries had very high MMRs of 550 or higher; and 12 countries had ratios of 1000 or higher. MMR estimates were not available for two countries (Figure 2a and 2b).

**Figure 2b: Maternal Mortality Ratio per 100,000 live births, countries of the African Region**
Achieve, by 2015, universal access to reproductive health.

Between 1990 and 2007, there was a 30% increase in access to contraceptives in the Region among currently married women. The prevalence of contraceptive use among currently married women (15–49 years old) varied from 75% to 5% in 2007. Only five countries had contraceptive use rates higher than 50% (Algeria, Cape Verde, Mauritius, South Africa and Zimbabwe), while 27 countries had usage rates less than 33%. Trend data were not available for nine countries.

Halt and begin to reverse, by 2015, the spread of HIV/AIDS.

Among the 13 countries that have complete trend data, 11 have started to observe declines or stabilization in HIV prevalence trends among pregnant women aged 15–24;8 HIV/AIDS prevalence has increased in two countries (Burundi and Malawi). The most recent prevalence estimates in the 13 countries ranged between 1.7% and 27.1%.

Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it.

Only a third of the population with advanced HIV infection in the Region had access to antiretroviral medicines in 2007 (Figure 3a and 3b). Three countries had coverage rates of more than 70% (Botswana, Namibia and Rwanda), while 39 countries had coverage rates below 50%. Trend data were not available for four countries.
Halt and begin to reverse, by 2015, the incidence of malaria and other major diseases.

Interpretation of the trends in malaria incidence and deaths using available data is difficult in the African Region due to incomplete reports, non-standardized reporting and reliance mostly on clinical diagnosis. Indicators of ITN and antimalarial coverage are preferred to measure progress toward the MDG targets. There were increases in the proportions of children under five sleeping under insecticide-treated bednets between 1999 and 2006 in all 18 countries with trend data, although coverage rates were lower than 50%. The use of antimalarial medicines for treating children with fever decreased between 1996 and 2006 in 14 countries out of 19 with complete trend data. This decrease is due to the shift from chloroquine treatment to the implementation of artemisinin-based combination therapy policy.

Five countries (Angola, Comoros, Eritrea, Seychelles and Zambia) are on track to achieve the target for tuberculosis, while eight countries have shown insufficient progress. Of the 33 countries that are making no progress, 14 have prevalence of 500 or more per 100,000 population; between 1990 and 2007, estimated prevalence increased in 27 countries due to the HIV pandemic. The prevalence ranged between 39 and 941 per 100,000 population per year.

Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

Nine countries are on track to achieve the safe water target. Six countries are making progress although it is insufficient, while 19 countries have made no progress. The proportions of population using improved drinking water sources varied between 42% and 100% in 2006. Trend data were not available for 12 countries. Of the 36 countries with trend data, 34 countries have made no progress to achieve the target for basic sanitation while two countries are on track (Algeria and Mauritius).

In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

The indicator for this target is the proportion of population with access to affordable essential medicines on a sustainable basis. The method for collecting data on this indicator was introduced only recently. Thus, adequate trend data were not yet available to assess countries’ progress on this target.
Progress on the goals of the health-related MDGs is mostly very slow in the African Region. Countries and their development partners should increase resources significantly and explore new and innovative ways to ensure progress.

Countries should allocate at least 15% of public expenditure to the health sector as set out in the 2001 Abuja Declaration (very few countries have achieved the target). In addition, they need to strengthen existing structures and mechanisms for sustainable, effective and efficient mobilization and utilization of internal and external resources.

It is necessary for countries to increase their attention to areas where progress has been limited, particularly to improve maternal health, by providing sufficient financing to strengthen maternal and other reproductive health services.

Both countries and partners should build international partnerships, sustain the gains achieved and scale up interventions to achieve the necessary reductions in under-five mortality as well as combat HIV/AIDS, malaria and tuberculosis.
Countries should strengthen leadership and institutional capacity within ministries of health, especially in macroeconomic analysis and strategic planning and budgeting. There is a need to increase dialogue between health and oversight ministries such as finance and planning.

National efforts should follow the “Three Ones” principle of one national plan, one coordination mechanism and one monitoring and evaluation plan while striving to achieve the MDGs.

Countries can improve the monitoring of progress towards the MDGs in collaboration with all stakeholders and international partners by:

(a) improving the frequency, quality and efficiency of national health surveys;
(b) strengthening birth and death registration;
(c) improving the availability of demographic data by completing the 2010 census round;
(d) improving surveillance and service statistics;
(e) enhancing monitoring of health systems strengthening; and
(f) strengthening the analysis, evaluation and use of data for decision-making.

Unless current trends are drastically changed, most countries of the African Region are unlikely to achieve any of the health or health-related MDGs. However, progress is possible if countries work with development partners to devote more resources, strengthen health systems, including the data sources for monitoring MDG progress, and improve access to proven interventions.

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4 Although the MDGs were adopted in 2000, the baseline year for the targets was set from 1990.


7 Algeria, Botswana, Cape Verde, Comoros, Eritrea, Gabon, Madagascar, Mauritius, Mozambique, Namibia, South Africa, Swaziland and Togo.

8 Benin, Botswana, Eritrea, Ethiopia, Ghana, Lesotho, Namibia, Rwanda, Swaziland, Zambia and Zimbabwe.

9 Cape Verde, Ghana, Guinea-Bissau, Mali, Mauritius, Namibia, Sao Tome and Principe, and South Africa.

10 Algeria, Botswana, Republic of Congo, Ghana, Guinea-Bissau, Malawi, Mauritania, and Sao Tome and Principe.

11 Botswana, Burkina Faso, Cote d’Ivoire, Ghana, Guinea, Malawi, Mauritius, Namibia and South Africa.
PROGRESS IN IMPLEMENTING THE CHILD SURVIVAL STRATEGY IN THE AFRICAN REGION

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En 2007, dans la région africaine, le taux de mortalité des enfants de moins de cinq ans a été estimé à 145 pour 1 000 naissances vivantes. Ces décès étaient principalement la conséquence de conditions prévisibles ou traitables. Pour s’attaquer à ce taux de mortalité élevé, l’OMS, l’UNICEF et la Banque Mondiale ont élaboré une stratégie de survie de l’enfant qui a été adoptée en 2006 par le cinquante-sixième Comité régional de l’OMS. Ce rapport, qui consiste en une révision faite en utilisant les rapports et les résultats d’un questionnaire envoyé aux pays, résume les progrès accomplis en mettant en œuvre la stratégie à la date de décembre 2009 et propose les prochaines étapes d’action.

Des réalisations significatives ont été accomplies dans les domaines de la politique, de la stratégie et du plan de développement; du renforcement des capacités, des partenariats et des stratégies de communication, des recherches d’opérations, de documentation et de suivi et d’évaluation ainsi que d’augmentation des interventions de survie de l’enfant telles que la couverture de la vaccination contre la rougeole, l’utilisation de moustiquaires imprégnées d’insecticide chez l’enfant et la fourniture de médicaments antituberculeux pour prévenir la transmission mère-enfant du VIH. Actuellement, 21 pays mettent en œuvre la stratégie de gestion intégrée des maladies de l’enfance dans plus de 75% des districts. Malgré les progrès accomplis dans certains domaines, la couverture de certaines interventions efficaces reste faible. Plusieurs défis relevés par des systèmes de santé entravent le progrès de la survie des enfants. Ceux-ci comprennent le financement insuffisant au niveau des pays pour augmenter les interventions efficaces, l’insuffisance de suivi de la couverture des interventions et la restriction des ressources humaines.

Afin d’augmenter la couverture des interventions efficaces de survie des enfants et accélérer les progrès dans la mise en œuvre de la stratégie régionale de survie de l’enfant, le document recommande plusieurs actions, notamment l’amélioration de la couverture des interventions clés pour la survie des enfants ainsi que la mobilisation et l’allocation de ressources nécessaires pour mettre en œuvre, à l’échelle nationale, des stratégies et des plans pour la survie des enfants.

Under-five mortality rate in the African Region was estimated at 145/1,000 live births in 2007. These deaths were the result mainly of preventable or treatable conditions. A child survival strategy for the African Region was developed by WHO, UNICEF and World Bank and adopted by the fifty-sixth WHO Regional Committee in 2006 to address this high mortality rate. This report, which is a review made using reports and the results of a questionnaire sent to countries, summarizes progress in implementing the strategy as at December 2009 and proposes next steps for action.

Significant achievement has been made in the areas of policy, strategy and plan development; capacity building; partnerships and communication strategies; operations research, documentation and monitoring and evaluation. Also in scaling-up of child survival interventions such as measles vaccination coverage, insecticide-treated nets use in children and provision of antiretroviral drugs to prevent mother-to-child transmission of HIV. Currently, 21 countries are implementing the Integrated Management of Childhood Illness strategy in more than 75% of the districts.

In order to increase coverage of effective child survival interventions and accelerate progress in implementation of the regional child survival strategy, the paper recommends several actions including the improvement of coverage of key child survival interventions and mobilization and allocation of resources to implement national child survival scale-up strategies and plans.

Avances significativos fueron dados na área de desenvolvimento de políticas, estratégias e de planos; capacitação; parcerias e estratégias de comunicação; investigação, documentação e monitorização e na avaliação e no aumento das intervenções com vista a aumentar a sobrevivência das crianças como a cobertura da vacinação contra sarampo, utilização de redes tratadas com inseticidas para crianças e o fornecimento de medicamentos antituberculosos para prevenir a transmissão do HIV de mães para filhos. Atualmente, 21 países estão a implementar a estratégia da Gestão Integrada de Doenças Infantis em mais de 75% dos distritos.

A pesar de avanços em algumas áreas, a cobertura de algumas intervenções eficazes permanece baixa. Diversos desafios a nível do sistema de saúde dificultam o progresso relativo à sobrevivência das crianças. Entre outros, um financiamento inadequado a nível nacional para o aumento de intervenções eficazes, uma monitorização inadequada da cobertura das intervenções e limitações ao nível dos recursos humanos.

Para aumentar a cobertura de intervenções eficazes relativas à sobrevivência das crianças e para acelerar o progresso na implementação da estratégia regional, o relatório propõe diversas medidas, incluindo a melhoria da cobertura das intervenções chave e a mobilização e atribuição de recursos para a implementação nacional de estratégias e planos para um aumento da sobrevivência das crianças.
The under-five mortality rate in the African Region was estimated at 145/1,000 live births in 2007.\textsuperscript{2} The Inter-agency Group for Child Mortality Estimation estimates that in 2008, 8.8 million children born alive globally died before their fifth birthday.\textsuperscript{3}

These deaths were mainly the result of preventable or treatable conditions. Major causes of childhood deaths are neonatal conditions, malaria, pneumonia, diarrhoea, with under-nutrition contributing to over a third of the deaths. Sub-Saharan African contributed to 49\% of the global child mortality, totalling 4.4 million child deaths in 2008. It is worth noting that the sub-Saharan contribution to global under-five mortality increased from 19\% in 1970 to 49\% in 2008.\textsuperscript{4} Despite Member States’ commitments to the Millennium Development Goals, the rate of decline in under-five mortality is still grossly insufficient to reach MDG goal 4 by 2015. The World Health Organization (WHO) African Region has made the least progress in improving child survival. Only five countries (Algeria, Cape Verde, Eritrea, Mauritius and Seychelles) in the Region are on track to the MDG 4 targets on child mortality reduction.

A child survival strategy for the African Region was developed by WHO, UNICEF and the World Bank and adopted by the fifty-sixth WHO Regional Committee in 2006.\textsuperscript{5} The strategy aims to scale up a defined set of effective child survival interventions, including antenatal care, newborn care, appropriate infant feeding, immunization, management of common childhood illnesses and use of insecticide-treated nets (ITNs). Member States were urged to develop policies for effective intervention scale-up; strengthen capacity for planning, implementation and monitoring child survival activities; develop communication strategies; develop effective partnerships; conduct operations research; document experiences and develop frameworks for monitoring and evaluation. The roles of WHO and partners include country support for scaling-up, documentation, operations research and facilitation of coordination and collaboration. A progress report on the implementation of the Regional child survival strategy was discussed at the 59\textsuperscript{th} session of the Regional Committee for Africa in Kigali, Rwanda, in September 2009. This report summarizes progress in implementing the strategy as at December 2009 and proposes the next steps for action.
POLICY, STRATEGY AND PLAN DEVELOPMENT
As of December 2009, 27 countries in the WHO African Region had developed comprehensive national child survival policies, strategies and plans; 24 countries adopted low osmolarity oral rehydration salts and zinc in management of childhood diarrhoea; in addition, 18 countries adopted policies of community case management for pneumonia and other childhood illnesses.

CAPACITY BUILDING
Since 2006, the capacity of 185 child health managers from 19 countries was developed to improve their skills in the management of child health programmes. Thirty-one countries built capacity for neonatal survival activities since adoption of the Child Survival Strategy during the same period. Capacity building in case management of childhood illness has continued in countries, both at health facility level as well as at community level.

PARTNERSHIPS AND COMMUNICATION STRATEGIES
From 2006 to date, national partnerships for maternal, newborn and child health were formed in seven countries. Maternal and child survival country profiles were developed through joint global tracking of progress towards MDGs 4 and 5. In addition, 11 countries promoted key family and community practices through communication and social mobilization.

OPERATIONS RESEARCH, DOCUMENTATION AND MONITORING AND EVALUATION
Since adoption of the child survival strategy, seven countries have conducted Child Health Facility Surveys to assess the quality of care provided to sick children at first level health facilities. Child health research has also been conducted in countries, including Ghana, Kenya and Uganda.

Results from these surveys suggest that IMCI in the presence of some practical and affordable health system tools (training, drugs, referral and supervision) is feasible for implementation in most of the African countries and is likely to lead to improved quality of care in the health facilities. Results show that IMCI case management training

METHODS
This review was carried out using reports and the results of a questionnaire sent to countries. The indicators tracked for progress made were selected based on formerly agreed upon child health programme indicators as well as those that reflect coverage of the interventions proposed in the Regional child survival strategy.

Information on progress made in selected child survival indicators was obtained from World Health Organization reports from Regional, intercountry and country levels. These included annual, semi-annual and quarterly reports. Baseline information was obtained from reports where available.

In addition, a self-administered quantitative questionnaire was sent to WHO child health focal points to obtain additional information on some indicators. The questionnaire was developed by the WHO Division of Family and Reproductive Health. It was made up of 21 questions divided into various sections which included policies, strategies and plans, operations research, newborn and child health. Questions included availability of national child health policies, strategies and plans, geographic coverage of Integrated Management of Childhood Illness (IMCI), expansion of components of IMCI to include HIV, Newborn (0-7 days) and Low Osmolarity Oral Rehydration Salts/Zinc. It also included questions on community case management of malaria and pneumonia. The questionnaire was sent to WHO country child health focal points of the 46 countries in the WHO African Region. Of these, 43 countries responded. All responses were included in the analysis.

Selected information from various reports on progress in child survival was summarized. Data from the questionnaire were entered into a spreadsheet. This was also summarized and analyzed.
leads to correct assessment and classification of illnesses of children presenting to health facilities.

In Tanzania where the analysis was stratified by status of training of health workers, the survey showed a statistically significant difference in the proportion of children correctly managed when health workers trained in IMCI case management examined the children. The same study in Tanzania showed that IMCI had contributed to 13% mortality reduction in children U5 years over a two years period.  

WHO, UNICEF, USAID/AED/Africa 2010 and Regional Centre for Quality Health Care, Uganda, supported an assessment of utilization of oral rehydration therapy in Benin, Ethiopia, Mali, Senegal and Zambia. These assessments have been completed and data analysis/report writing is in progress. The results of these assessments will inform childhood diarrhoea case management strategies in the Region.

SCALE-UP OF CHILD SURVIVAL INTERVENTIONS

Since adoption of the strategy, Integrated Child Health Weeks have been conducted in 13 countries. During these Weeks, essential interventions such as vaccinations, vitamin A supplementation, de-worming medicines and ITNs were provided to augment routine services. Increased measles vaccination coverage has contributed to an 89% decrease in measles deaths in the Region between 2000 and 2007. Recent data from 18 countries, estimates that ITN use in children at 23% in 2007. Provision of antiretroviral drugs to prevent mother-to-child transmission of HIV (PMTCT) improved from 31% in 2006 to 43% in 2007 for Eastern and Southern Africa and from 7 to 11% for West and Central Africa. Children under 15 years on antiretroviral therapy increased from 5,000 in 2005 to 158,000 in 2008. Figure 1 below summarises the current coverage of key child survival interventions.

As shown in Figure 2, 21 countries are implementing the Integrated Management of Childhood Illness (IMCI) in more than 75% of the districts. Thirty-two countries have adapted their IMCI guidelines to include HIV and 36 countries have included the first week of life (0–7 days). The expansion of IMCI contributes to improved capacity for child health care in countries.

Figure 1: Coverage of child survival interventions along the continuum of care, WHO African Region, 2008

Malawi, Uganda, Zambia and Zimbabwe built capacity of 15 resource persons on home-based newborn care. Botswana, Lesotho and Namibia built the capacity of 21 programme managers and pre-service teachers on Essential Newborn Care at health facility level.

Ethiopia, Gabon, Kenya, Malawi, Nigeria and Zambia built the capacity of over 150 tutors of training institutions in infant and young child feeding (IYCF) counseling. Five countries\(^18\) reviewed their IYCF policies and strategies. Kenya, Nigeria and Zambia documented their best practices and experiences in scaling up infant feeding activities. Fourteen countries\(^19\) adapted the new WHO child growth standards bringing the total number of adapting countries to 20.

Discussion

As a result of implementation of various child survival programmes such as immunization campaigns, vitamin A supplementation and use of insecticide-treated nets, some countries have recorded increased coverage in key interventions.

Despite the achievements in some areas, coverage of some effective interventions remains low. Exclusive breastfeeding in the first six months of life and appropriate care seeking for acute respiratory infections have remained static between 2005 and 2007. The rates for appropriate treatment for diarrhoea and fever declined over the same period. The results reported in 2009 on coverage of exclusive breastfeeding in the first six months of life, utilization of oral rehydration therapy and continued feeding during childhood diarrhoea remain low. The percentage of children under five years of age with suspected pneumonia who are taken to an appropriate health care provider is reported to be 46% while the percentage of those with fever receiving antimalarial drugs is 35% in sub-Saharan Africa. A high coverage of all key effective child survival interventions is vital for reduction of child deaths.

Disaggregation of the Regional averages of coverage of some child survival interventions shows that some countries have made significant progress in areas like exclusive breast feeding in the first six months of age and vitamin A supplementation. However, the overall situation remains severe at the Regional level.

Various health system challenges hamper child survival progress. These include inadequate
country-level funding for scaling up effective interventions, inadequate monitoring of coverage of interventions and human resource limitations. HIV infection and conflict are key underlying factors in countries making the least progress in child mortality reduction. Accelerated efforts are required to achieve set targets.

The review of the progress in implementation of the Regional child survival strategy shows modest improvement in coverage of some child survival indicators. However, there is an urgent need to accelerate efforts to ensure high coverage, particularly in areas of greatest need.  

In order to increase coverage of effective child survival interventions and accelerate progress in implementation of the Regional child survival strategy, countries, with support from partners, should:

1. Use available opportunities to improve coverage of key child survival interventions e.g. Child Health Weeks/Days, vaccination campaigns and introduction of new vaccines.
2. Mobilize and allocate appropriate resources to implement national child survival scale-up strategies and plans, using domestic resources as well as external funding opportunities like The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and The Global Alliance for Vaccines and Immunization (GAVI).
3. Develop and/or implement monitoring frameworks to regularly monitor progress in coverage of child survival interventions to facilitate remedial actions at district levels.
4. Consider allowing, facilitating, and providing training for management of common childhood illnesses and conditions like malaria, diarrhoea and pneumonia, to Community Health Workers, particularly in places where access to health facilities and/or human resources are limited.

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THE EFFORT TO ATTAIN MEASLES PRE-ELIMINATION TARGETS BY 2012 AND TO ELIMINATE MEASLES IN THE AFRICAN REGION BY 2020

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Reduction in measles mortality contributes significantly towards attaining the Millennium Development Goal 4 (MDG 4), which aims to reduce overall under-five childhood deaths by two thirds by 2015, compared with 1990 levels. Routine measles immunization coverage is a key indicator for measuring progress towards attainment of this goal.

Implementation of measles mortality reduction strategies in the African Region has led to major achievements, notably a reduction of estimated measles deaths by 92% between 2000 and 2008. Despite the progress made, renewed commitment by countries is required to attain the pre-elimination targets and subsequently reach the ultimate goal of measles elimination by 2020.

Countries will need to strengthen their immunization systems through ensuring that quality immunization services reach the hard-to-reach populations in addition to scaling up implementation of proven approaches and strategies such as the Reaching-Every-District approach. Gaps in the mobilization of resources have had a negative impact on the ability of countries to attain and sustain a high level of routine immunization and supplemental immunization activities coverage. Countries will also need to adopt a stepwise approach towards achieving the measles elimination goal by 2020, beginning with the attainment by 2012 of the proposed pre-elimination targets.

La réduction de la mortalité due à la rougeole contribue de manière significative à la réalisation de l’Objectif du Millénaire pour le développement N° 4 (OMD 4), qui vise à réduire globalement les décès des enfants de moins de cinq ans des deux tiers d’ici à 2015, par rapport aux niveaux de 1990. La couverture de la vaccination systématique contre la rougeole est un indicateur clé pour mesurer les progrès en vue de la réalisation de cet objectif.

La mise en œuvre de stratégies de réduction de la mortalité due à la rougeole dans la région africaine a conduit à d’importantes réalisations, notamment une réduction des décès provoqués par la rougeole de 92% entre 2000 et 2008. Malgré les progrès réalisés, l’engagement renouvelé par pays est nécessaire pour parvenir aux cibles de pré-élimination et, par la suite, atteindre l’objectif ultime de l’élimination de la rougeole d’ici à 2020.

Les pays devront renforcer leurs systèmes de vaccination en s’assurant que les services de vaccination de qualité touchent les populations difficiles à atteindre et, en complément, augmenter la mise en œuvre des approches et des stratégies qui ont fait leurs preuves telles que l’approche “Atteindre chaque district”. Les lacunes au niveau de la mobilisation des ressources ont eu un impact négatif sur la capacité des pays à atteindre et maintenir un niveau élevé de vaccination systématique et de couverture des activités de vaccination de complément. Les pays devront aussi adopter une approche progressive en vue de la réalisation de l’objectif visant à éliminer la rougeole d’ici à 2020, en commençant par la réalisation en 2012 des cibles proposées de pré-élimination.

A redução da mortalidade por sarampo contribui significativamente no alcance do 4º Objetivo de Desenvolvimento do Milênio (ODM 4), que pretende reduzir, até 2015, a mortalidade em crianças menores de cinco anos em dois terços em comparação com os níveis de 1990. A cobertura de imunização de rotina contra o sarampo representa um indicador chave para a medição do progresso no alcance deste objectivo.


Os países têm de reforçar os seus sistemas de imunização, assegurando que além de reforçar a implementação de abordagens e estratégias comprovadas como, por exemplo, o objectivo de atingir todos os distritos (Reaching-Every-District), os serviços de imunização também abrangam as populações mais difíceis de atingir. Falhas na mobilização de recursos resultaram num impacto negativo na capacidade dos países atingirem e manterem os elevados níveis de imunização de rotina e em suportarem actividades suplementares de cobertura de imunização. Além disso, os países têm também de adoptar uma abordagem passo-a-passo para atingir a meta da eliminação do sarampo até 2020, começando com a realização dos objectivos de eliminação propostos para 2012.
Measles mortality reduction contributes to attaining the Millennium Development Goal 4 (MDG 4). MDG 4 aims to reduce overall under-five childhood deaths by two-thirds by 2015, compared with 1990 levels. Routine measles immunization coverage is a key indicator in measuring progress towards attaining this goal.

Measles causes a significant number of childhood deaths. Measles mortality in the year 2000 is estimated at 750,000 worldwide, of which 395,000 (53%) were in the African Region. Four-fifths of these deaths were estimated to have occurred among children below five years of age.1

In 2001, countries in the African Region adopted the Regional Strategic Plan for Immunization (2001–2005) which included a goal of reducing measles deaths by 50% by 2005 as compared with 1999 estimates2. Subsequently, in 2006, a revised Regional EPI Strategic Plan (2006–2009) was adopted, with the goal of reducing measles deaths by 90% by 2009 as compared with 2000 estimates.3

The strategies being implemented to attain the measles mortality reduction goals include: increasing routine immunization coverage; providing a second opportunity for measles immunization through catch-up and follow-up Supplemental Immunization Activities (SIAs);4 establishing case-based surveillance with laboratory confirmation; and improving case management. The support from the Measles Initiative5 had been crucial in terms of assisting the Region to implement these strategies.

Between 2001 and 2008, major achievements were made in implementing these strategies in the African Region, including the attainment of an average of 81% regional measles immunization coverage in 2008, up from 52% in 2001. (Figure 1). In 2008, 11 of the 46 countries achieved administrative measles coverage of 90% or more. However, of these 11 countries, only Seychelles has 100% of districts with coverage levels of at least 90%.

In addition, 425 million children were vaccinated through SIAs between 2001 and November 2009 in 43 countries.6 (Figure 2).

In order to monitor the impact of the immunization strategies,
40 countries in the Region\(^7\) have been supported to establish case-based surveillance for measles with laboratory confirmation. Surveillance performance is monitored regularly, and 16 of those 40 countries attained the targets for the two main surveillance performance indicators in 2008.\(^8\)

Despite these successes, the incidence of measles remains high in the Region. In 2008, the average incidence was 22 cases per million inhabitants. Even though 28 countries reported incidence rates of five cases or fewer per 1 million inhabitants, surveillance quality was inadequate in 10 countries. The six countries with the highest disease burden make up 37\% of the population of the Region and had incidence rates ranging from 20 to 65 measles cases per 1 million population.\(^9\)

With regard to the 90\% measles mortality reduction goal for 2009, a reduction of 92\% has been achieved in estimated measles deaths between 2000 and 2008. This reduction accounted for 60\% of the global reduction of estimated measles deaths by 2008.

Following these successes in reducing measles deaths in the Region, the African Regional Task Force on Immunization (TFI) requested the Regional Measles Technical Advisory Group (TAG) to review the progress and the feasibility of adopting elimination goals for the African Region. The TAG proposed the adoption of a pre-elimination goal to be met by 2012, and this was endorsed by the TFI in December 2008.

The pre-elimination goal consists of achieving all of the following targets: more than 98\% mortality reduction by 2012 compared to estimates for 2000; measles incidence of less than 5 cases per 1 million inhabitants per year in all countries; more than 90\% routine first dose measles immunization coverage at national level and at least 80\% in all districts; 95\% or more SIAs coverage in all districts; and achievements by all countries of the targets for the two main surveillance performance indicators.

The attainment of the pre-elimination goal by 2012 will bring the African Region closer to the elimination goal. Measles elimination is defined as the absence of endemic measles cases for a period of twelve months or more, in the presence of adequate surveillance, and when the following criteria are met: achieving and maintaining at least 95\% coverage with both first dose measles vaccination and the second opportunity of measles vaccination in all districts and at the national level; having less than 10 confirmed cases in 80\% or more of measles outbreaks; and achieving a measles incidence of less than one confirmed measles case per million inhabitants per year.
CHALLENGES

A number of challenges remain to be addressed in order to sustain the gains in measles mortality reduction and prepare for the ultimate goal of measles elimination in the African Region.

NATIONAL COMMITMENT AND LEADERSHIP

Strong commitment and leadership is crucial to sustaining the mortality reduction and subsequent attainment of measles elimination. So far, countries have provided the leadership that has led to the current attainment of the mortality reduction goals. However, renewed commitment will be needed to scale up implementation in order to attain the pre-elimination targets and subsequently reach the ultimate goal of measles elimination by 2020.

INADEQUATE ACCESS TO IMMUNIZATION SERVICES

While countries have made considerable progress in improving routine immunization coverage, 25 of the 46 countries (54%) have failed to raise and sustain coverage beyond 80%. Despite the introduction of the Reaching-Every-District (RED) approach to strengthen immunization coverage, services have not expanded adequately to ensure enough coverage of the hard-to-reach populations in all districts. Health service providers still miss opportunities for measles vaccination of eligible children in areas accessible to service delivery. The community linkages necessary for the success of immunization services are not well established in many countries, leading to coverage gaps at sub-national levels.

QUALITY OF IMMUNIZATION COVERAGE MONITORING DATA

The unexpected occurrence of large scale and protracted measles outbreaks in countries reporting high measles immunization coverage levels indicates problems in immunization monitoring data quality. This is linked to the underestimation of target populations and gaps in the coverage monitoring system in a number of countries.

CONTINUED HIGH INCIDENCE IN SOME COUNTRIES

Despite the significant reduction in measles deaths, an estimated 28,000 children died from measles in the African Region in 2008. Some countries continue to experience relatively high measles incidence. For example, in 2008, 12 countries representing 46% of the regional population had measles incidence levels of more than 5 cases per million inhabitants. A few countries continue to experience relatively large scale outbreaks even after their catch-up and follow up SIAs. For example, in 2008, Nigeria reported a total of 9,415 confirmed measles cases, most of whom were unvaccinated young children from the Northern States which did their catch-up SIAs in 2005. Between 1 January and 30 November 2009, Burkina Faso reported a huge outbreak of measles involving 59 of its 63 districts, with a total of 53,188 cases. These outbreaks were linked to multiple pockets of low coverage in routine immunization and SIAs, leading to a critical build-up of susceptible populations.

SUB-OPTIMAL SURVEILLANCE PERFORMANCE

In 2008, 11 of the 40 countries in the measles case based surveillance network did not meet the targets for the two main surveillance performance indicators. Disease surveillance activities are under-funded and under-staffed in many countries. In addition, the strategic and operational linkages between surveillance information and the immunization programme remain weak.

RESOURCE MOBILIZATION

Major gaps persist in the mobilization of resources to finance the implementation of proven measles mortality reduction strategies. These resource gaps have had a negative impact on the ability of Member States to attain and sustain high routine immunization and SIAs coverage levels.
THE WAY FORWARD

It is essential that countries take the following actions to attain the pre-elimination targets by 2012 and prepare for the ultimate goal of measles elimination by 2020.

- **STRENGTHEN HEALTH SYSTEMS**: Countries need to strengthen their health systems, particularly their immunization systems. This requires scaling up the implementation of proven approaches and strategies such as the RED approach, and ensuring adequate immunization logistics support.

- **NATIONAL OWNERSHIP AND COMMUNITY PARTICIPATION TOWARDS MEASLES ELIMINATION BY 2020**: Countries need to ensure that measles elimination is included as a key item in the national health agenda. It will be important to allocate the necessary human and financial resources and to facilitate the coordination of partners and the participation of communities in support of national plans to fully implement the proposed operational strategies for the attainment of the ultimate measles elimination goal.

- **ATTAINING HIGH ROUTINE COVERAGE AND IMPLEMENTING HIGH QUALITY MEASLES SIAS**: Countries also need to improve and sustain high immunization coverage levels through routine services, through periodic activities to intensify support for routine immunization and through SIAs. Coverage gaps between districts should be kept minimal in order to maintain low disease incidence levels and avoid outbreaks. The attainment of at least 95% SIAs coverage in all districts will also be crucial.

- **ADDRESSING SURVEILLANCE PERFORMANCE AND THE QUALITY OF IMMUNIZATION MONITORING DATA**: Countries need to strengthen surveillance performance by allocating the necessary resources in order to better monitor the impact of disease control efforts. The introduction of systematic and regular data quality assessment exercises within the immunization framework will be important to improve the quality of immunization monitoring data.

It is also critical that the Measles Initiative and other global partners continue to mobilize the necessary resources to support countries in addressing the challenges to the attainment of the Regional measles elimination goal.

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4. Nationwide catch-up SIAs target all children in a particular age group (most frequently children aged 9 months to 14 years), and have the goal of eliminating susceptibility to measles in the general population. Periodic follow-up SIAs target all children born since the last SIA. Follow-up SIAs are generally conducted nationwide every two-to-four years and target children aged 9 to 59 months, with the goal of eliminating any measles susceptibility that has developed in recent birth cohorts as well as protecting children who did not respond to their first measles vaccination.

5. The Measles Initiative, launched in 2001, is a partnership committed to reducing measles deaths globally and is spearheaded by the American Red Cross, the United Nations Foundation, CDC, UNICEF, and WHO. The Initiative has been providing financial, technical and advocacy support to the African Region for the fight against measles.

6. All countries in the African Region except Algeria, Mauritius and Seychelles.

7. These 40 countries include all Member States in the African Region except Algeria, Comoros, Guinea-Bissau, Mauritius, Sao Tome & Principe and Seychelles.

8. The two main surveillance performance indicators are: Non-measles febrile rash illness rate (target of at least 2 per 100 000 population) and the proportion of districts that have investigated at least one suspected case of measles with blood specimen per year (target of 80% or more per year).


10. Angola, Chad, Côte d’Ivoire, Democratic Republic of Congo, Equatorial Guinea, Liberia, Mozambique, Rwanda, Sierra Leone, Tanzania and Zimbabwe.
WHAT CAN BE DONE TO IMPROVE WOMEN’S HEALTH IN THE AFRICAN REGION?

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Women constitute a key link in the chain of development actions worldwide. For women to be able to fulfil their role in society, however, they need to be in a state of adequate physical, mental and social well-being. Unfortunately, the huge majority of African women are still unaware of their fundamental rights to health, education and life, and suffer from ill-health and sub-standard living condition.

Global leaders, including African ministers of health, have adopted a number of resolutions to improve women’s health. However, the health situation of women in Africa continues to be poor, with 57% of women in the African Region lacking access to assistance by qualified staff during childbirth, one out of twenty-six women being at risk of dying from birth-related complications, to mention a couple of significant indicators.

Given that the issues of women’s health are complex, this paper calls for multisectoral and concerted action involving the public and private sectors, nongovernmental organizations, communities and families. For this, it proposes that countries set up a multidisciplinary technical team composed of experts in health, gender and human rights to identify priority interventions for effective scaling up and resource mobilization for women’s health at national level.

Among the ways forward proposed in the paper are scaling up women’s health-related interventions; using the primary health care approach in line with the Ouagadougou Declaration to effectively deliver women’s health interventions; strengthening the capacity of women, families and communities to prevent diseases; and empowering them economically to enable them to take appropriate decisions related to their health and sexuality.

Les femmes constituent un maillon essentiel dans la chaîne des actions de développement dans le monde. Pour que les femmes soient en mesure de remplir leur rôle dans la société, elles doivent être dans un état physique, mental et de bien-être social satisfaisant. Malheureusement, l’immense majorité des femmes africaines ignorent encore leurs droits fondamentaux à la santé, à l’éducation et à la vie et elles souffrent de mauvaise santé et de conditions de vie en dessous des normes.

Des dirigeants internationaux, dont les ministres africains de la santé, ont adopté un certain nombre de résolutions visant à améliorer la santé des femmes. Toutefois, en Afrique, les femmes continuent d’avoir une situation sanitaire médiocre. Pour ne citer que quelques indicateurs significatifs, 57% des femmes en région africaine n’ont pas accès à l’assistance d’un personnel qualifié pendant l’accouchement et une femme sur vingt-six risque de mourir de complications liées à la naissance.

Étant donné que les problèmes de santé des femmes sont complexes, ce document fait appel à une action multisectorielle et concertée impliquant les secteurs public et privé, les organisations non gouvernementales, les communautés et les familles. Pour cela, il propose que les pays mettent en place une équipe technique pluridisciplinaire composée d’experts de la santé, des sexes et des droits de l’homme afin d’identifier les interventions prioritaires pour l’augmentation et la mobilisation efficace des ressources pour la santé des femmes au niveau national.

Parmi les pistes proposées dans le document, on trouve l’augmentation des interventions en relation avec la santé des femmes utilisant la première approche des soins de santé en conformité avec la Déclaration de Ouagadougou pour fournir efficacement des interventions de santé aux femmes, en renforçant la capacité des femmes, des familles et des communautés pour prévenir les maladies et en leur donnant les moyens économiques pour leur permettre de prendre les décisions appropriées relatives à leur santé et leur sexualité.

As mulheres constituem um elo fundamental na cadeia de ações de desenvolvimento a nível mundial. Para cumprir o seu papel na sociedade, no entanto, elas precisam de ter um estado adequado de bem-estar físico, mental e social. Infelizmente, a grande maioria das mulheres Africanas ainda não estão conscientes dos seus direitos fundamentais à saúde, educação e à vida, sofrendo de problemas de saúde e sub-condições de vida normal.

Líderes mundiais, incluindo os ministros da saúde Africanos adoptaram uma série de resoluções para melhorar a saúde das mulheres. No entanto, a situação de saúde da mulher em África é calamitosa, com 57% das mulheres na Região Africana sem acesso à assistência de pessoal qualificado durante o parto, 1 em cada 26 mulheres apresentando risco de morrer de complicações relacionadas com o parto, apenas para mencionar alguns indicadores.

Dado que as questões da saúde das mulheres são complexas, o documento pede uma ação multisectorial e concertada, envolvendo o sector público e privado, organizações não-governamentais, comunidades e famílias. Para isso, propõe que os países criem uma equipa técnica multidisciplinar composta por especialistas em saúde, gênero e direitos humanos para identificar as intervenções prioritárias para a intensificação e mobilização eficaz de recursos para a saúde das mulheres a nível nacional.

A necessidade de intensificar as intervenções relacionadas com a saúde das mulheres; a utilização da abordagem de cuidados primários de saúde em consonância com a Declaração de Ouagadougou para efectivamente realizar intervenções de saúde das mulheres; reforçar a capacidade das mulheres, famílias e comunidades para prevenir doenças e fortalecimento económico das mulheres de forma a tomarem decisões apropriadas relativas à sua saúde e sexualidade são algumas das ações propostas no documento.
By virtue of their multiple roles, women constitute a key link in the chain of development actions worldwide. Women not only account for over half of the population of countries in general, but they also invest their energy in families and communities, thus contributing to the wealth of nations.

Women need to be in a state of adequate physical, mental and social well-being to be able to carry out their numerous responsibilities. Against this background, during the United Nations Decade for Women (1975–1985) and at various international meetings on population and development¹, Member States of the United Nations agreed that women’s health and their active participation in development actions were closely linked.

Unfortunately, the huge majority of African women are still unaware of their fundamental rights to health, education and life as part of the fundamental rights they gained several decades ago.² They continue to suffer from socio-cultural discrimination, harmful traditional practices such as female genital mutilation (FGM), gender-based violence, food taboos, forced marriages, and early and unwanted pregnancies, all of which are very harmful to their health.

These problems, coupled with the weakness of health systems, are at the root of the high maternal mortality in sub-Saharan Africa where 1 out of every 26 women is at risk of dying during childbirth compared with 1 woman out of every 7300 in industrialized countries. Furthermore, of the 14 countries worldwide where maternal mortality is above 1000 per 100 000 live births, 13 are in sub-Saharan Africa.

As maternal mortality is one of Africa’s major health problems, countries and their development partners made a commitment at the Millennium Summit (2000) to reduce this mortality by three quarters between 1990 and 2015 (the fifth Millennium Development Goal – MDG 5). Although a 5.5% annual average reduction of maternal mortality was required in order to achieve MDG 5, the actual annual reduction in sub-Saharan Africa between 1990 and 2005 was only 0.1%.⁴

African ministers of health have adopted a number of resolutions on women’s health and their contribution to development, including a roadmap to accelerate progress on MDG5.⁵ In addition, the 2008 Ouagadougou Declaration on Primary Health Care and Health Systems in Africa focused on strengthening health systems to address maternal health, women’s health and related issues using the primary health care approach.⁶

CHALLENGES

The Women’s Health Strategy for the African Region sets forth interventions based on the national women’s health profile which defines the country’s economic situation, the status of women in general and the status of women’s health. Sixteen countries already have developed their national women’s health profiles; however, very few have integrated women’s health into their national health policies and programmes.⁷

The 2001 Regional Strategy on Adolescent Health has two main
thrusts: prevention of teenage pregnancy and control of sexually-transmitted infections and HIV/AIDS. National strategies have been developed by a number of countries, but implementation remains a challenge.

The Road Map for accelerating the attainment of the Millennium Development Goals related to maternal and newborn health in Africa (MDG5) aims to provide women with assistance by qualified staff during childbirth and with access to quality emergency obstetric care. Although most of the countries of the Region already have their National Road Map, mobilization of resources for effective implementation has been difficult.

According to WHO estimates, 57% of women in the African Region lack access to assistance by qualified staff during childbirth. The shortage of skilled birth attendants in health facilities, especially in rural areas, exposes women to preventable death.

The Child Survival Strategy for the African Region (2006) emphasizes the need to respect the rights of the child, including the girl-child. However, the majority of girls are still subjected to discrimination, abuse and neglect. Addressing this problem remains a challenge in the Region.

Men are not adequately informed about the problems women face due to various social and cultural beliefs. The weak involvement of men in issues regarding girls, adolescents and women make it difficult to address women's health problems.

Despite international efforts to eliminate gender-based violence, including FGM, FGM has decreased in only 10 countries, owing to entrenched cultural and traditional beliefs. Addressing the problem of FGM in the remaining 17 countries has proved to be a major challenge.

The average life expectancy at birth in the African Region is 51 years for women. Case studies on motherhood-related disability in some countries show that disability of women is a huge but unaddressed problem. In addition, women traditionally give a lower priority to their own health compared with the health of other members of the family.

Competing priorities, recurrent conflicts, poverty, and misunderstanding women's roles hamper the allocation of adequate resources to women's health. Issues of women's health are complex and require multisectoral and concerted action involving the public and private sectors, nongovernmental organizations, communities, families and individual women themselves.

THE WAY FORWARD

Women’s health remains critical despite the commitments and efforts of Member States of the WHO African Region to improve the situation. There is a need to integrate women’s health issues into existing programmes based on gender and human rights approaches. The following actions need to be addressed in the implementation of the Regional women’s health strategy for effective impact on women’s health.

It is important to strengthen existing multisectoral bodies to advocate for the implementation of international conventions and instruments related to women’s health and development adopted by countries. These include the Millennium Development Goals and the Ouagadougou Declaration on Primary Health Care and Health Systems.

Countries will need to set up a multidisciplinary technical team composed of experts in health, gender and human rights to identify priority interventions for effective scaling up of, and resource mobilization for, women’s health at the national level. The team should have clear terms of reference in order to assess and monitor trends in women’s health.
Countries also need to scale up essential interventions related to women’s health with special emphasis on rural areas. It is important to expand coverage of services, enhance the skills of health workers (skilled birth attendants) and social workers, and improve the existing facilities with particular emphasis on referral systems and availability of medicines in order to provide quality, timely and affordable care for women.

The primary health care approach should be used in line with the Ouagadougou Declaration to deliver women’s health interventions. It is also essential to improve the utilization of services by women in general and by pregnant women in particular through active involvement of men and community participation. Men’s involvement is important to address financial and geographical barriers to women’s access to essential health services.

Strengthening the capacity of women, families and communities to prevent diseases by providing them with information on appropriate care and on the risk of diseases is crucial. Women should be economically empowered to access health services and to take appropriate decisions related to their health and sexuality.

A number of countries are making progress in the area of maternal and women’s health. These countries need to be supported to document and share their best practices to stimulate other countries in the Region to emulate their examples.

Countries will also need to develop an integrated communication plan to increase understanding of the importance of women’s roles and promote societal attitude change towards women. This plan should be comprehensive and interactive to address all the major obstacles to women’s health. The relationship between the health of the mother and the well-being of the child should be reflected in this plan.

It is essential that internal and external funds are mobilized for effective implementation of essential women’s health interventions, including by implementing the 2001 Abuja Declaration, in which African Heads of State committed themselves to allocate 15% of national budgets to the health sector. Various funding sources for women’s health should be explored, including health insurance schemes and other community funding mechanisms, and allocate specific funds for the implementation of national Road Maps.

Strengthening partnerships with women’s rights groups, including community-based organizations, nongovernmental organizations and women’s associations, and integrating women’s health issues into their agendas is also important. Collaboration between key stakeholders including development partners should be strengthened for effective coordination.

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We gratefully acknowledge the contributions of all those professionals at HQ, IST and WCO level for the review of the paper and at the country levels who are involved in data collection, processing and dissemination. Assessment of the women’s health issues or monitoring its interventions would not have been possible without their crucial efforts.

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In 2005, the WHO Regional Committee for Africa called upon countries to accelerate HIV prevention and to declare 2006 as the Year of Acceleration of HIV Prevention in the African Region. The strategy document that was developed by WHO Regional Office was adopted by the Region’s ministers of health in August 2006. The strategy proposed targets to be met by 2010, in line with universal access targets, in areas of HIV testing and counselling; prevention of mother-to-child transmission of HIV; prevention and control of sexually-transmitted infections; blood safety, and access to comprehensive prevention, treatment and care. Specifically, it was envisaged that, by 2010, all districts will provide HIV testing and counselling services; 100% safe blood and blood products will be ensured; at least 80% of pregnant women attending antenatal care will access prevention of mother-to-child transmission of HIV services; at least 80% of patients with sexually-transmitted infections will access comprehensive STI management; at least 80% of people living with HIV/AIDS will have access to comprehensive prevention, treatment and care services; and condom use in high-risk sexual encounters will reach at least 60%. This paper describes the progress made in accelerating key health sector HIV prevention interventions in the Region toward these targets and issues that should be taken into consideration for moving forward the HIV prevention agenda in the health sector.
The strategy proposed targets to be met by 2010, in line with universal access targets, in areas of HIV testing and counselling; prevention of mother-to-child transmission (PMTCT) of HIV; prevention and control of sexually-transmitted infections (STIs); blood safety, and access to comprehensive prevention, treatment and care. Specifically, it was envisaged that (by 2010) all districts will provide HIV testing and counselling services; 100% safe blood and blood products will be ensured; at least 80% of pregnant women attending antenatal care will access PMTCT services; at least 80% of patients with sexually-transmitted infections will access comprehensive STI management; at least 80% of people living with HIV/AIDS will have access to comprehensive prevention, treatment and care services; and condom use in high-risk sexual encounters will reach at least 60%.

This paper describes the progress made in accelerating key health sector HIV prevention interventions in the Region toward these targets and issues that should be taken into consideration for moving forward the HIV prevention agenda in the health sector.

**METHODS**

Country-reported data for districts and health services were used in assessing progress toward the targets. The data are available in the WHO Regional Office HIV/AIDS database. Published estimates as well as data from UN-based sources, including the 2008 and 2009 universal access reports, were also used to assess progress for some targets. Progress was assessed by comparing the most recent Regional averages with earlier averages. The Regional averages used in assessing progress are weighted averages, where the population sizes of individual countries are used as weights, particularly for population-based surveys.

This paper has been reviewed by a technical panel at the WHO Regional Office for Africa. It was also presented to Ministers of Health of the WHO African Region at the 59th session of the Regional Committee.

**PROGRESS MADE**

Sub-Saharan Africa is making steady progress in accelerating HIV prevention. According to new data in the 2009 epidemic update, new HIV infections have been reduced globally by 17% over the past 8 years, with most progress in sub-Saharan Africa. The number of new infections in sub-Saharan Africa is approximately 15% lower than in 2001.

Scaling up access to HIV testing and counselling is the gateway to prevention, treatment and care services, and is critical to the achievement of universal access to HIV prevention, treatment and care. In just one year (2007–2008), the total number of health facilities providing HIV testing and counselling (HTC) services increased by 50%. Over 17 million people aged 15 and above received the services in Sub-Saharan Africa in 2008.

Countries are implementing various models of HTC, from the traditional voluntary counselling and testing to the new concept of provider initiated HIV testing and counselling, which is aimed at increasing uptake of HTC and improving access to health services for people living with HIV.
Mother-to-child transmission is responsible for about 20% of all new HIV infections in sub-Saharan Africa. In 2008, over 600,000 HIV-positive pregnant women reportedly received antiretrovirals (ARVs) for the prevention of mother-to-child transmission of HIV, resulting in 45% coverage and an increase of 17% since 2007. Among 43 countries that reported in 2008, the median number of facilities per country that offer PMTCT services is 156. Botswana has reached the 80% target and other countries including Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Uganda, United Republic of Tanzania, Zambia and Zimbabwe have taken concrete steps to scale up MC. Actions taken included situation analyses, development of policies, strategies and plans, training of service providers, and provision of MC services.

In 2007, WHO and UNAIDS recommended that safe male circumcision (MC) be added to the arsenal of effective HIV prevention interventions, particularly in countries in eastern and southern Africa with high HIV prevalence rates and low male circumcision rates. Since then, countries including Botswana, Burundi, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Swaziland, Uganda, United Republic of Tanzania, Zambia and Zimbabwe have taken concrete steps to scale up MC. Actions taken included situation analyses, development of policies, strategies and plans, training of service providers, and provision of MC services.

The scale up of antiretroviral therapy (ART) is expected to have a significant impact on the reduction of new HIV infections in the African Region. At the end of 2008, an estimated 6.7 million HIV-infected people were in need. Of these, about 3 million HIV-infected people received ART, resulting in 43% coverage, compared with 33% in 2007. The number of health facilities providing ART also increased by 51% in just one year. The bulk of this achievement comes from eastern and southern African countries, which have the highest rates of HIV infection.

In 2007, 40 countries reported that 100% of the blood used for transfusion was screened for HIV; this compared with 98% in 2004. Eleven countries are implementing specific programmes to strengthen infection prevention and control. However, reports indicate that 50% of medical injections administered in developing countries were given with reused, non-sterilized equipment.

Demographic and Health Surveys (DHS) carried out between 2005 and 2008 indicate that condom use for the last high-risk sexual encounter among people aged 15–49 years ranged from 26% to 71% for males and 14% to 47% for females, with a median of 45% for males and 26% for females. Condom use among 15–24-year-olds engaging in high-risk sex increased in 10 out of 14 countries with trend data. The DHS surveys also show that comprehensive knowledge of HIV/AIDS among people aged 15–49 remains very low (ranging from 6.9% to 58.9% in
WAY FORWARD

HIV prevention is firmly on the agenda of countries and development partners and encouraging progress is being made in accelerating health sector HIV prevention in the African Region.

However, much more needs to be done: An estimated 2 million new HIV infections were reported in 2008; as the DHS indicated, comprehensive knowledge of HIV/AIDS is low. Less than 20% of people living with HIV know their status and coverage of services among populations at high risk remains low.

Challenges also include weak health systems to support scaling up of effective HIV prevention interventions, as well as addressing multiple and concurrent sexual partnerships, which continue to be among the main drivers of the HIV epidemic in the African Region.

Virtual elimination of HIV transmission from mother to child is possible. There is a need to ensure that all pregnant women are systematically screened for HIV and ARVs for PMTCT are systematically provided to all HIV-infected pregnant women and their infants.

Accelerated scaling up of HIV testing and counselling, scaling up of ART service provision together with timely initiation of treatment, and scaling up of safe male circumcision in areas of high HIV prevalence, are likely to significantly contribute to the reduction of new HIV infections in the African Region.

There is a need to do more to address unsafe sex; the need for more outspoken leadership on issues of concurrent multiple sexual partnerships which continue to drive the HIV epidemic in sub-Saharan Africa. There is also a need for the African leadership to create the necessary environment for addressing the needs of key populations, including sex workers, if any impact is to be made on the course of the epidemic.

ACKNOWLEDGEMENTS

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6. Ibid.
9. These programmes include PEPFAR projects being implemented in countries with support from John Snow Incorporated in close collaboration with the WHO Regional Office for Africa.
Africa is the continent most affected by malaria, accounting for 86% of the estimated 247 million malaria episodes and 91% of malaria deaths worldwide in 2006. In high endemic countries in the Region, it is estimated that malaria reduces economic growth by an annual average rate of 1.3%, mainly as a result of absences from work or school. The poorest people are the most exposed to malaria and its complications owing to their inadequate housing, bad living conditions and limited access to health care. This paper describes ways of accelerating implementation of malaria prevention and control interventions towards eventual elimination. The principal ways forward described are:

1. updating malaria policies and strategic plans,
2. strengthening national malaria control programmes,
3. procuring and supplying quality antimalarial commodities,
4. accelerating the delivery of key interventions for universal coverage and impact,
5. consolidating malaria control achievements in high endemic countries,
6. moving from control to pre-elimination and elimination when appropriate,
7. strengthening surveillance, monitoring and evaluation,
8. scaling up partnership coordination and alignment as well as resource mobilization, and
9. strengthening malaria research.
Since 1991, several initiatives, resolutions and meetings have put malaria back at the top of the public health agenda.\textsuperscript{4,5,6} In 1998, the Roll Back Malaria initiative was launched to advocate for and coordinate malaria control efforts, aiming at halving the malaria burden by 2010. Roll Back Malaria progressively led to increased commitment to malaria prevention and control, culminating in the 2006 Abuja African Union Heads of State call for universal access to HIV/AIDS, tuberculosis and malaria services by 2010 and the call for malaria elimination. This was followed by launch of the Africa Malaria Elimination Campaign by the African Union in 2007 and the UN Secretary-General’s call for 100% coverage of malaria control interventions by 2010\textsuperscript{7}.

Malaria control results from deliberate efforts to reduce the disease burden to a level where it is no longer a public health problem. Malaria elimination, for its part, is an interruption of local mosquito-borne malaria transmission in a defined geographic area.\textsuperscript{8} Moving from malaria control to elimination should be seen as a continuum with the ultimate goal of interrupting malaria transmission.

The key malaria interventions are vector control using insecticide-treated nets (ITNs), indoor residual spraying (IRS), intermittent preventive treatment of malaria in pregnancy (IPTp) and effective treatment. Artemisinin-based combination therapy (ACT) is now the treatment of choice in 41 of the 43 malaria-endemic countries; 20 countries are implementing ACT country-wide. By the end of 2007, IPTp had been adopted in all the 35 endemic countries where it was recommended, and 20 countries are implementing IPTp country-wide.\textsuperscript{9}

Between 2000 and 2006, ITN distribution increased three- to ten-fold in most countries. Subsidized or free ITNs have increased bednet coverage. ITN distribution is often linked to antenatal care, routine immunization services and campaigns. By the end of 2007, 17 of the 43 malaria-endemic countries in the African Region were using indoor residual spraying as one of the key malaria control interventions, while six countries were pilot-testing IRS in a few selected districts.

A rapid decline in malaria burden is possible when a comprehensive package of malaria prevention and control interventions is implemented in the same geographic area at the same time, as has been shown in Botswana, Eritrea, Ethiopia,
Kenya, Rwanda, Sao Tome and Principe, South Africa and Swaziland.10

The purpose of this paper is to describe ways of accelerating implementation of malaria prevention and control interventions towards eventual elimination.

ISSUES

Some countries do not have comprehensive policies and strategies to guide the scaling up of malaria control. The private sector is not usually engaged or involved during adoption of national policies for access to malaria prevention and treatment services. The long wait between policy adoption and implementation has delayed efforts to control the disease in many countries as shown, for example, by the wide gap between the adoption of artemisinin-based combination therapy (ACT) policy and its actual country-wide implementation.

While access to any antimalarial medicine ranges from 10% to 63% for children under five years of age with fever, access to ACT for the same group has remained at only 3% in the 13 countries with data for 2006.10 The continued use of artemisinin monotherapy, particularly in the private sector, remains a major setback, potentially contributing to the emergence of resistance and to the shortening of the useful therapeutic life of ACT.

Although progress has been made by countries in scaling up ITNs and IRS, many countries have not yet reached the internationally agreed targets. This is a result of the lack of capacity for large-scale IRS campaigns. As a result, in 2006, only five African countries reported IRS coverage sufficient to protect at least 70% of people at risk of malaria. By the end of 2007, 34% of households in 18 countries of the African Region owned at least one ITN.

However, there is a gap between ownership and effective use of ITNs which needs to be addressed through operational research. While uptake of the first dose of intermittent preventive treatment of malaria for pregnant women ranges from 23% to 93%, coverage for the second dose is still low and ranges from 5% to 68%.12 The challenge is to ensure that all pregnant women take their recommended doses of IPTp and also that all households with ITNs use them.

Malaria treatment is characterized by gross over-diagnosis and over-treatment. Studies have shown that 32% to 96% of febrile patients receive antimalarial treatment without parasitological diagnosis. In some cases it has been shown that only 30% of febrile patients receiving ACT are proven to have malaria13,14,15. Such improper diagnostic practices undermine the correct management of malaria and non-malarial fevers.

Although many endemic countries have established national malaria control programmes, there is inadequate human resource capacity at all levels to ensure efficient utilization of resources.
available for scaling up the various interventions. Weak health information systems also make it difficult to report on programme performance and impact.

Despite the increased inflow of external resources, inadequate funding for malaria control is still an issue. By the end of 2008, none of the malaria-endemic countries had fulfilled the Abuja commitment to allocate 15% of government expenditure to the health sector. Resources from African governments represent only 18% of the US$ 622 million disbursed in 2007. Furthermore, many countries have difficulties accessing international funds, or managing them appropriately where they are available.

The prevailing socioeconomic environment in sub-Saharan Africa further compounds the malaria situation. Poor households in malaria-endemic countries spend significant proportions of their income on malaria treatment, which pushes them further into poverty. The ongoing climate change related to global warming could further expand malaria transmission areas and put more people at risk.

Global and regional political commitment has led to increased interest in malaria elimination in the African Region. Figure 2 shows malaria programme phases and transitions from control to elimination. Countries in stable transmission areas should complete the consolidation phase before engaging in stepwise reorientation of the programme to pre-elimination and then elimination and prevention of reintroduction as per the milestones shown.

All malaria-endemic countries in the African Region are in the control phase but lack reliable data to enable them proceed to programme reorientation. Weak health systems in most moderate and low transmission settings in the Region need to be strengthened in order to meet the requirements of an elimination programme. A major challenge is posed by the large asymptomatic reservoir coupled with high vector capacities in many sub-Saharan countries. Currently, malaria control relies on a limited number of insecticides and medicines for prevention and treatment. Resistance to some insecticides and medicines has already occurred. Therefore, the global elimination of malaria is likely to require research and development of new biomedical tools, operational research, behaviour change and adjustment of existing interventions to meet country-specific requirements. In many countries there is an increasing number of partners investing in malaria control. However, coordination is still a major challenge. In many instances, fragmented implementation of malaria control is a consequence of project-based approaches.
THE WAY FORWARD

Significant progress has been made thanks to the opportunities offered by high-level political commitment and the increased resources from various partners such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Bank Booster Programme, the US President’s Malaria Initiative, and the Bill and Melinda Gates Foundation. However, important issues and challenges remain at national and international levels. Various actions to address these issues and challenges are needed for countries to accelerate the scaling up of malaria elimination in the African Region. These are described below.

/update malaria policies and strategic plans
Where required, the national health policy should be updated and correctly implemented. It is important to undertake comprehensive country programme reviews in order to identify the gaps between the targets and the current situation; it is also necessary to assess the interventions and resource gaps in order to minimize the time lag between planning and implementation. Health system bottlenecks should be identified and addressed in order to accelerate and scale up malaria control interventions towards elimination.

/strengthen national malaria control programmes
The structures of national malaria control programmes should be based on the national health strategic plan, human resource strategic plan and the local epidemiological setting. It is important to ensure that enough financial resources are provided so that key functions related to programme management, planning, partnerships, resource mobilization, case management, integrated vector management, surveillance, monitoring and evaluation, procurement and supply management, and community-based interventions are carried out. Countries should decentralize their programmes to ensure appropriate flow of resources and work towards appropriate integration at the operational level.

/procure and supply quality antimalarial commodities
Countries should ensure uninterrupted availability of quality, affordable malaria medicines and commodities while avoiding stock-outs by implementing adequate procurement and supply-chain management systems. This can be done by strengthening quantification, forecasting, acquisition, stock and logistics management, distribution, quality assurance, appropriate use, information system management, and pharmacovigilance, involving both the public and private sectors in the context of existing national systems for essential medicines and health technologies procurement and management.

/accelerate the delivery of key interventions for universal coverage and impact
Countries should ensure that a comprehensive package of interventions is progressively implemented nationwide for impact. Interventions for prevention include long-lasting insecticide-treated nets (LLINs), indoor residual spraying (IRS) using an integrated vector management approach and intermittent preventive treatment of malaria in pregnancy (IPTp). Interventions for case management are parasitological diagnosis and effective treatment. Quality control and assurance systems for microscopy and rapid diagnostic tests (RDTs) must also be ensured. The interventions should be delivered free-of-charge or at an affordable cost through health facilities and community structures and integrated with other programmes. Community involvement is critical for accelerating implementation of proven interventions. Where effectively implemented, community-based interventions including appropriate use of
case management guidelines and algorithms contribute significantly to the scaling up of interventions.

CONSOLIDATE MALARIA CONTROL ACHIEVEMENTS IN HIGH ENDEMIC COUNTRIES

Areas which were formerly of high stable transmission and which achieve a marked reduction in the burden of malaria should have a consolidation period before embarking on pre-elimination if their slide positivity rates are less than 5%. Cross-border collaboration should be promoted and supported by regional economic communities and partners to maximize impact.

MOVE FROM CONTROL TO PRE-ELIMINATION AND ELIMINATION WHEN APPROPRIATE

In some countries natural conditions or control efforts have reduced the risk of malaria transmission to low levels and have localized unstable transmission in well-defined areas. Such countries should conduct comprehensive malaria programme reviews followed by programme reorientation to pre-elimination. In the pre-elimination phase, the surveillance system should be adapted to detect and respond to all malaria outbreaks by active case detection, parasitological diagnosis, effective treatment and focal vector control.

STRENGTHEN SURVEILLANCE, MONITORING AND EVALUATION

There is need to strengthen malaria surveillance in the routine work of health information systems and integrated disease surveillance and response, including reporting confirmed malaria cases. The surveillance, monitoring and evaluation systems should use the health information system as the main source of data, complemented by surveys. Drug efficacy and
insecticide susceptibility tests should be performed annually to enable timely identification of resistance as well as the necessary actions and policy decisions.

**SCALE UP PARTNERSHIP COORDINATION AND ALIGNMENT AS WELL AS RESOURCE MOBILIZATION**

Partner coordination and alignment using the established mechanisms should be strengthened at country, regional and global levels to avoid duplication of efforts and to improve efficiency. Strong advocacy for increased and sustained funding as well as effective and efficient use of existing resources to fill existing gaps needs to be maintained at all levels for sustainable impact on malaria. To maximize resources and to address the socioeconomic determinants of health, the fight against malaria should be linked to poverty alleviation programmes.

**STRENGTHEN MALARIA RESEARCH**

For countries in the control phase, operational research, including behavioural aspects should focus on the best approaches and tools to quickly deliver and sustain the main interventions at community and health facility level. For countries which have achieved sustained impact, operational research should focus on the technical and financial feasibility of moving to pre-elimination and elimination. Countries and partners should advocate for operational research to expand the knowledge base as well as research and development for new tools.

**ACKNOWLEDGEMENTS**

We gratefully acknowledge the contributions of all those professionals at HQ and IST for the review of the paper and at the country levels who are involved in data collection, processing and dissemination. Assessment of the magnitude of malaria or monitoring its control would not have been possible without their crucial efforts.

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7. On World Malaria Day in April 2008, UN Secretary-General Ban Ki-moon called for universal coverage with proven malaria tools by the end of 2010, and appointed Ray Chambers as the UN Special Envoy for Malaria to mobilize global support for action on the disease.


With just 10% of the world population, sub-Saharan Africa has the highest burden of HIV/AIDS, tuberculosis and malaria in the world. Both access to and adequate utilization of effective treatment with quality-assured medicines are crucial for reducing the disease burden. However, efforts to improve access to treatment are hampered by the development of HIV, TB and malaria drug resistance. This is a result of genetic mutations and is a major threat to control of HIV/AIDS, TB and malaria.

HIV drug resistance can be minimized by good antiretroviral treatment (ART) programmes, removal of barriers to continuous access to ART and reduction of HIV transmission. Recent surveys conducted at antenatal clinics in several countries in the African Region estimated that HIV resistance to all drug classes is less than 5%. A global HIV drug resistance network established in 2001 supports countries in capacity building and guidance on standard procedures for monitoring HIV drug resistance.

Multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB) are principally a result of inadequate or poorly administered treatment regimens. The new WHO Stop TB Strategy launched in 2006 identifies management of MDR-TB as a core component of TB control. The magnitude of MDR-TB in the African Region is still unknown. Since 2007, 33 countries notified MDR-TB cases, and eight reported at least one case of XDR-TB.

Following widespread resistance to chloroquine and sulphadoxine-pyrimethamine all malaria-endemic countries except two in the Region have changed the treatment policy to artemisinin-based combination therapy (ACT). The main method of monitoring antimalarial drug resistance is through therapeutic efficacy testing. To date there has been no confirmed resistance to ACTs in the African Region.

Given the emergence and spread of resistance to HIV, TB and malaria drugs, the purpose of this paper is to describe the issues and challenges and propose a way forward with regard to the prevention and control of such resistance.
Avec seulement 10% de la population mondiale, l’Afrique subsaharienne est le pays le plus fortement affecté par le VIH / SIDA, la tuberculose et le paludisme dans le monde. Tant l’accès que l’utilisation adéquate de traitements efficaces utilisant des médicaments de qualité assurée sont essentiels pour réduire le poids de la maladie. Toutefois, les efforts pour améliorer l’accès au traitement sont entravés par l’évolution du VIH, de la tuberculose et par la résistance aux médicaments contre le paludisme. Ceci est le résultat de mutations génétiques et constitue une menace majeure pour le contrôle du VIH / SIDA, de la tuberculose et du paludisme.

La pharmaco-résistance du VIH peut être réduite en mettant en place de bons programmes de traitements antirétroviraux (TAR), en supprimant les obstacles pour avoir un accès permanent aux traitements antirétroviraux (TAR) et en réduisant la transmission du VIH. Dans plusieurs pays de la région africaine, des enquêtes récentes menées dans les dispensaires prénatals ont estimé que la résistance du VIH à toutes les classes de médicaments est inférieure à 5%. Un réseau global de pharmaco-résistance du VIH, créé en 2001, soutient les pays pour renforcer leurs capacités et leurs conseils par rapport aux procédures standard pour surveiller la pharmaco-résistance du VIH.


Com apenas 10% da população mundial, a África subsariana apresenta o maior fardo relacionado com o VIH/SIDA, tuberculose e malária em todo o mundo. Tanto o acesso, como a utilização adequada de tratamentos eficazes com medicamentos de qualidade garantida são cruciais para a redução do fardo associado a estas doenças. No entanto, os esforços para melhorar o acesso ao tratamento têm sido dificultados pelo desenvolvimento de resistência aos medicamentos contra a SIDA, a tuberculose (TB) e malária. Isso é devido a mutações genéticas e representa uma ameaça grave para o controlo do VIH/ SIDA, TB e malária.

A resistência aos medicamentos contra a SIDA pode ser reduzida através de bons programas de tratamento anti-retro vírais (ART), a remoção das barreiras ao acesso continuado aos ART e a redução da transmissão do VIH. Estudos recentes realizados em clinicas pró-natais em diversas países da Região Africana estima-se que a resistência a todas as classes de medicamentos é inferior a 5%. Uma rede mundial relacionada com a resistência a medicamentos, estabelecida em 2001, ajuda países a criar capacidade e a propor orientação relativa a processos estandardizados na monitorização da resistência a medicamentos contra a SIDA.

A tuberculose multi-resistente (MDR-TB), a tuberculose extensivamente resistente (XDR-TB) são sobretudo o resultado de tratamentos inadeguados ou mal administrados. A nova estratégia da OMS para tratar a tuberculose (WHO Stop TB Strategy) publicada em 2006, identifica a gestão da MDR-TB como a componente central do controlo da TB. A dimensão da MDR-TB na Região Africana continua desconhecida. Em 2007, 27 países anunciaram casos de MDR-TB e 8 comunicaram pelo menos um caso de XDR-TB. A seguir à resistência generalizada à cloroquina e à sulfadoxina-pirimetamina, todos os países com malária endêmica com a exceção de dois países na Região alteraram a sua política de tratamento a favor de uma terapia combinada à base de artémisinina (ACT). O método principal na monitorização da resistência a medicamentos contra a malária é a realização de ensaios rigorosos relativos à eficácia terapêutica. Até à data não foi confirmada uma resistência a ACTs na Região Africana.

Face ao aparecimento e à propagação da resistência aos medicamentos contra o VIH, a tuberculose e o paludisme, le but de cet article est de décrire les enjeux et les défis ainsi que de proposer une voie à suivre en ce qui concerne la prévention et le contrôle d’une telle résistance.
The need for lifelong antiretroviral treatment (ART), coupled with the high HIV replication and mutation rates, means that resistance will emerge even among appropriately treated, compliant individuals. However, HIV drug resistance can be minimized by good ART programmes, removal of barriers to continuous access to ART and reduction of HIV transmission.2

HIV drug resistance assessment is primarily through monitoring of early warning indicators at ART sites. HIV drug resistance surveys are also performed in geographic areas where ART has been widespread for more than 3 years. Recent surveys conducted at antenatal clinics in several countries in the African Region estimated that HIV resistance to all drug classes is less than 5%.4,5,6,7 A global HIV drug resistance network established in 2001 supports countries in capacity building and guidance on standard procedures for monitoring HIV drug resistance.8

Multidrug-resistant TB (MDR-TB) is defined as tuberculosis caused by organisms that are resistant to at least isoniazid and rifampicin. Extensively drug-resistant TB (XDR-TB) is defined as MDR-TB that is also resistant to any one of the fluoroquinolones and to at least one of three injectable second-line medicines (amikacin, capreomycin or kanamycin).9 MDR-TB and XDR-TB are principally a result of inadequate or poorly administered treatment regimens.

The new WHO Stop TB Strategy launched in 2006 identifies management of MDR-TB as a core component of TB control. The magnitude of MDR-TB in the African Region is still unknown. Since 2007, 33 countries notified MDR-TB cases, and eight reported at least one case of XDR-TB.

Following widespread resistance to chloroquine and sulphadoxine-pyrimethamine all malaria-endemic countries except two in the Region have changed the treatment policy to artemisinin-based combination therapy (ACT). Since 1997, countries in the Region have established six subregional antimalarial drug resistance networks that have provided a forum for information sharing, capacity building and the development of new treatment policies (ACTs) across the Region.

The main method of monitoring antimalarial drug resistance is through therapeutic efficacy testing. To date there has been no confirmed resistance to ACTs in the African Region. However,
since 2003, evidence has been accumulating that ACTs are less effective against Plasmodium falciparum on the Cambodia-Thailand border.\textsuperscript{10,11} 

Given the emergence and spread of resistance to HIV, TB and malaria drugs, the purpose of this paper is to describe the issues and challenges and propose a way forward with regard to the prevention and control of such resistance.

ISSUES

The use of combination therapy is recommended in the treatment of AIDS, TB and malaria as one of the approaches to prevent the development of drug-resistant strains. ART regimens should include potent combinations of at least two classes of ARV drugs. Tuberculosis treatment regimens have always been based on a combination of medicines. The first-line treatment for malaria is now artemisinin-based combination therapies (ACTs) which is also a combination of medicines. However, off-the-counter sales, inappropriate prescription of medicines by inadequately trained or supervised health workers coupled with poor compliance by patients are still major challenges in the African Region.

Prolonging the useful therapeutic life of AIDS, TB and malaria drugs through rational use of medicines while ensuring complete patient treatment (or, in the case of HIV, life-long treatment) is a major issue. Poor procurement and supply management systems leading to stock-outs and sometimes use of expired medicines increase the probability of developing drug-resistant strains of HIV, TB and malaria. Poor compliance with treatment regimens and limited availability of support systems for patients also contribute to the emergence of drug resistance. Similarly, there is concern about increased infiltration of markets by substandard and fake medications against life-threatening diseases in developing countries.\textsuperscript{12}

Owing to their high cost and limited global supply, second-line medicines for the treatment of MDR-TB and XDR-TB are not readily available in countries. Second-line TB medicines are less effective and more toxic than first-line medicines and cost 3 to 20 times more – a huge financial burden that most countries cannot afford. Similarly, second-line antiretroviral medicines are more expensive. Of the 33 countries reporting any MDR-TB cases since 2007, only 20 were known to have an MDR-TB treatment programme. Even where treatment programmes exist, not all confirmed cases are accessing treatment.

Good laboratory services are essential for confirming diagnosis, monitoring treatment outcomes and guiding decisions to change to second-line treatment. Rapid diagnostic tests (RDTs) in general have increased opportunities for case confirmation and promotion of rational prescription. RDTs are now readily available for HIV and malaria. New technologies such as liquid culture media are being introduced for TB; many reduce the time required for drug susceptibility testing. Laboratory capacity is, however, still limited in the Region. For HIV, universal availability and use of appropriate, affordable CD4 testing and HIV viral-load testing are needed to monitor ART and to limit emergence of resistance. However, routine measurement of CD4 counts and HIV viral loads for patients on ART is still limited in many countries in the Region.\textsuperscript{13,14}

For TB, most countries have limited national laboratory capacity for acid-fast bacilli (AFB) culture and drug susceptibility testing and have to send samples to laboratories in other countries or to supra-national laboratories. Transfer of samples across borders requires compliance with stringent regulations. Of the 25 global supra-national TB reference laboratories, only two are in the African Region, and
these are already overloaded. HIV drug-resistance testing is not recommended for routine clinical ART management in the Region; the ResNet network of accredited genotyping laboratories in the Region, with additional support from specialist laboratories, is adequate for current surveillance needs.

In most TB control programmes, there is a general lack of infection control at community and health facility level that is necessary for reducing transmission of TB, MDR-TB and XDR-TB. This is a result of the introduction of short-course chemotherapy as the treatment of choice in 1993 which deviated from the previous policy of isolating TB patients during treatment. The recent upsurge of MDR-TB and XDR-TB has, however, raised awareness about the need to reintroduce stringent infection control measures to break transmission of all forms of TB in communities and health-care settings.

Although there has been an increase in financial resources for the control of HIV/AIDS, TB and malaria, these resources cannot readily be used for the development of infrastructure that is necessary for drug resistance monitoring. Some equipment and reagents for drug resistance monitoring are expensive to purchase and maintain.

THE WAY FORWARD

Most of the issues related to the widespread development of drug resistance to HIV/AIDS, TB and malaria are due to health system challenges. These include among others, policies and strategies, coordination mechanisms, human resources, laboratory infrastructure, procurement and supply management including logistics, monitoring and evaluation, infection control as well as research and resources mobilization. These challenges must be addressed before the situation worsens. Countries should thus take the following concrete steps to prevent and control of drug resistance related to AIDS, tuberculosis and malaria.

➤ DEVELOP AND IMPLEMENT POLICIES AND STRATEGIES THAT IMPROVE ACCESS TO CORRECT DIAGNOSIS AND EARLY EFFECTIVE TREATMENT

An important first step is to develop or strengthen clear policies and strategies for management of HIV/AIDS, TB and malaria to address issues such as affordability, access and quality of services while ensuring full community engagement in the process. Policy must elaborate clear diagnostic and treatment guidelines which are user-friendly and consider the different types of service providers. Guidelines must be updated regularly, ensuring clear criteria for changing from first-line medicines to second-line or higher level regimens. Guidelines should also address issues surrounding rational use of medicines, pharmacovigilance, drug resistance monitoring and quality assurance. Monitoring of patient compliance should also be ensured at all levels through patient education and training of service providers.

➤ DEVELOP HUMAN RESOURCE CAPACITY FOR PREVENTION AND MANAGEMENT OF DRUG RESISTANCE

Countries should ensure that all relevant health workers are aware of the factors related to development and management of drug resistance related to AIDS, TB and malaria. There is need to train service providers in the rational use of drugs as well as in the recognition and management of drug side-effects in order to ensure adherence of patients to treatment.

➤ STRENGTHEN NATIONAL AND SUBNATIONAL HEALTH LABORATORY NETWORKS

Ideally, the national laboratory network should have a pyramidal structure. For example, for TB, there should be one AFB microscopy laboratory serving a population of approximately 50 000. There
should also be one AFB culture laboratory per 5 million population and at least one national reference laboratory with drug sensitivity testing capability per country.

**ESTABLISH AND SUSTAIN SUBREGIONAL NETWORKS FOR DRUG RESISTANCE MONITORING**
Subregional networks can serve as hubs for capacity building and technical assistance for drug susceptibility testing as well as platforms for strategic information sharing across countries for decision-making. They can also provide backup support to the national laboratory networks and quality assurance services. Furthermore, they should participate in drug resistance monitoring and surveillance programmes. Collaboration with centres of excellence should be encouraged. While drug resistance networks are operational for HIV/AIDS and TB, there is need to revive the dormant malaria networks.

**STRENGTHEN PROCUREMENT AND SUPPLY OF HIV/AIDS, TUBERCULOSIS AND MALARIA MEDICINES**
Countries need to strengthen their procurement and supply chain management systems to ensure uninterrupted availability of good quality, affordable medicines and commodities for prevention and control of HIV/AIDS, tuberculosis and malaria. Appropriate implementation of activities on quantification and forecasting, acquisition, stock and logistics management, distribution, quality assurance, appropriate use, pharmacovigilance, information system management and reinforcement of regulations to prevent proliferation of counterfeit medicines, will contribute to reducing the risk of drug resistance.

**SET UP DRUG RESISTANCE AND DRUG EFFICACY MONITORING SYSTEMS**
Regular monitoring of resistance to TB medicines should be conducted as an integral part of routine surveillance. All cases identified should be reported; cases of MDR-TB and XDR-TB should be notified. With HIV representative surveys on a population level are recommended as part of routine surveillance. For malaria, therapeutic efficacy tests of first- and second-line medicines should be conducted at designated sentinel sites.

**IMPLEMENT ADMINISTRATIVE, ENVIRONMENTAL AND PERSONAL PROTECTION INFECTION CONTROL MEASURES FOR MDR- AND XDR-TB**
It is necessary to institute administrative, environmental and personal protection and integrated infection control
measures in order to minimize transmission to vulnerable groups such as health-care workers, family members and persons living with HIV/AIDS. Administrative measures include putting in place and implementing an infection control policy which provides for training of staff, education of patients and public, isolation of patients and use of respirators. Environmental controls include ventilation, filtration or ultraviolet germicidal irradiation.

**Advocate for Research and Development of New Diagnostic Tools and Medicines**

Operational research on specimen collection and transportation in resource-limited countries is required. Operational research is also required on adaptation of the directly-observed treatment short course to the challenges of MDR-TB and XDR-TB. For HIV, laboratory tests to monitor adverse events and ART failure would do more to limit resistance than access to resistance testing. New point-of-care technology for CD4 counts and viral loads is an urgent requirement. Capacity for conducting clinical trials for new drugs should be improved in the Region.

**Mobilize Financial Resources for Supporting Implementation of Drug Resistance Actions in the Context of Health System Strengthening**

Countries should make provision in their national health budgets for funds to support activities for prevention, control and monitoring of drug resistance. Countries should also mobilize additional resources from global initiatives such as the Global Fund to Fight AIDS, Tuberculosis and Malaria; the President’s Emergency Plan for AIDS Relief (United States); the US President’s Malaria Initiative; and from the Bill and Melinda Gates Foundation and the World Bank. Funds mobilized from other partners would help strengthen health systems as well in order to address the emergence of drug resistance.

To address this situation, development partners should continue to provide technical support to countries, advocate for more resources and long-term international support, and monitor the progress in implementing interventions that aim to prevent and control drug resistance related to AIDS, tuberculosis and malaria.

**Acknowledgements**

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CDER EDITORIAL

INFORMATION FOR ACTION:
RELAUNCHING THE COMMUNICABLE DISEASES EPIDEMIOLOGICAL REPORT

Surveillance information is essential for appropriate responses and actions by public health authorities in charge of disease prevention and control. In September 1998, during the 48th WHO Regional Committee for Africa, Member States unanimously adopted integrated disease surveillance (IDS) as their strategy for strengthening national surveillance systems. Since then, 43 countries in the WHO African Region have been implementing IDS, thus contributing to significant improvements in surveillance and control efforts.

In May 2005, the 58th World Health Assembly adopted the revised International Health Regulations (IHR (2005)), which entered into force on 15 June 2007. The IHR (2005) are legally binding and lay out specific requirements for strengthening national public health systems for international health security. The IHR (2005) require that core capacities for surveillance and response be strengthened in countries, including at selected points of entry. Therefore the functions of the Integrated Disease Surveillance and Response (IDSR) framework and IHR are mutually supportive. That is why Member States of the African Region decided that IHR will be implemented using the IDSR framework.

Coordination, collaboration and commitment: these are the keys to achieving our goal of reducing the burden of diseases in the African Region. A coordination mechanism for IDS is being set up at country, intercountry and WHO Regional office levels to support the collection and analysis of surveillance data for generating information. This is our pledge to countries and to our partners.

With anticipated thanks for your support,

DR. PAUL-SAMSON LUSAMBA-DIKASSA
DIRECTOR OF PROGRAMME MANAGEMENT
South Africa detected and confirmed the first case of pandemic (H1N1) 2009 in the WHO African Region on 18 June 2009. The case was not indigenous. By 26 November 2009, 29 countries had reported to WHO 15,690 laboratory-confirmed cases and 107 deaths (Figure 1). Most of the deaths were associated with other underlying health conditions.

Good preparedness, laboratory networking and partnership have contributed to the timely detection of subsequent cases, as well as the response efforts of the WHO African Region to the pandemic. This includes dissemination of WHO guidelines to public health staff in all Member States, strengthened partnership through laboratory networking, training field staff on the shipment of dangerous pathogens fulfilling requirements of the International Air Transport Association and supplying specimen collection material and reagents to countries who have expressed the need for them. Moreover, reporting mechanisms and tools were disseminated, communication and team work enhanced with daily crisis management meetings.

The Region is also benefitting from the contribution of a network of influenza laboratories. These laboratories are also part of the Global FluNet programme. The findings of this network for 2009 to date are summarized in Table 1.

Figure 1: Laboratory-confirmed cases of pandemic (H1N1) 2009 in the WHO African Region

### Table 1: Geography of influenza pathogens in the WHO African Region, 2009

<table>
<thead>
<tr>
<th>Country</th>
<th>Laboratory name</th>
<th>Specimens processed</th>
<th>A (H1)</th>
<th>A pandemic (H1N1) 2009</th>
<th>A (H3)</th>
<th>A not subtyped</th>
<th>B</th>
<th>Total Influenza positive</th>
<th>Percent A pandemic (H1N1) 2009 of all positive</th>
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<tr>
<td>Algeria</td>
<td>NIC Alger</td>
<td>520</td>
<td>32</td>
<td>49</td>
<td>52</td>
<td>0</td>
<td>9</td>
<td>21</td>
<td>163</td>
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<td>Cameroon</td>
<td>CP Yaounde</td>
<td>432</td>
<td>5</td>
<td>56</td>
<td>71</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>134</td>
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<tr>
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<td>293</td>
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<td>0</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>60</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>IP Abidjan</td>
<td>865</td>
<td>33</td>
<td>2</td>
<td>117</td>
<td>0</td>
<td>51</td>
<td>17</td>
<td>220</td>
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<tr>
<td>Democratic Republic of the Congo</td>
<td>INRB Kinshasa</td>
<td>829</td>
<td>12</td>
<td>15</td>
<td>48</td>
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<td>2</td>
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<td>85</td>
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<td>0</td>
<td>4</td>
<td>26</td>
<td>161</td>
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<td>148</td>
<td>22</td>
<td>45</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>223</td>
</tr>
<tr>
<td></td>
<td>KEMRI/CVR Nairobi</td>
<td>1680</td>
<td>51</td>
<td>22</td>
<td>85</td>
<td>0</td>
<td>111</td>
<td>20</td>
<td>289</td>
</tr>
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<td>Madagascar</td>
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<td>1</td>
<td>15</td>
<td>53</td>
<td>0</td>
<td>0</td>
<td>91</td>
<td>409</td>
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<tr>
<td>Rwanda</td>
<td>NRL Rwanda</td>
<td>445</td>
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<td>29</td>
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<td>Senegal</td>
<td>IP Dakar</td>
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<td>0</td>
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<td>168</td>
<td>0</td>
<td>4</td>
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<td>7949</td>
<td>6</td>
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<td>27</td>
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<td>3</td>
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<td></td>
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<td><strong>489</strong></td>
<td><strong>4531</strong></td>
</tr>
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</table>

COMMENT:

Between April and 27 November 2009, processing of 20,649 laboratory specimens by the networking influenza laboratories found 4,531 positive for influenza viruses in the Region. Of these, 41% were A (H3), 34% were A pandemic (H1N1) 2009, 11% influenza B, 9% seasonal A (H1), and 6% were A not subtyped (Table 2).

Table 2: Trends of influenza pathogens in the WHO African Region, 2009

<table>
<thead>
<tr>
<th>Week No</th>
<th>Specimens processed</th>
<th>A (H1)</th>
<th>A pandemic (H1N1) 2009</th>
<th>A (H3)</th>
<th>A (H5)</th>
<th>A Not subtyped</th>
<th>B</th>
<th>Total Influenza positive</th>
<th>% A pandemic (H1N1) 2009</th>
</tr>
</thead>
<tbody>
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<td>4</td>
<td>26</td>
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</tr>
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<td>15</td>
<td>87</td>
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<td>0</td>
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</tr>
</tbody>
</table>

Tables 3a and 3b show that the distribution is concentrated on young age groups. The median age is less than 35 years. 83% of the reported cases are less than 25 years old. The sex ratio is 100 female to 99 male.

Table 3a: Gender specific distribution of laboratory-confirmed influenza cases in the WHO African Region in 2009

<table>
<thead>
<tr>
<th>Sex</th>
<th>Cases</th>
<th>Mean</th>
<th>Minimum</th>
<th>25%</th>
<th>Median</th>
<th>75%</th>
<th>Maximum</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>540</td>
<td>18.9</td>
<td>0.3</td>
<td>13.0</td>
<td>17.0</td>
<td>21.5</td>
<td>80.0</td>
<td>14.0</td>
</tr>
<tr>
<td>M</td>
<td>537</td>
<td>17.6</td>
<td>0.4</td>
<td>12.0</td>
<td>16.0</td>
<td>20.0</td>
<td>71.0</td>
<td>18.0</td>
</tr>
<tr>
<td>Total</td>
<td>1077</td>
<td>18.3</td>
<td>0.3</td>
<td>12.0</td>
<td>16.0</td>
<td>21.0</td>
<td>80.0</td>
<td>14.0</td>
</tr>
</tbody>
</table>


Table 3b: Age and gender specific distribution of laboratory-confirmed influenza cases in the WHO African Region in 2009

<table>
<thead>
<tr>
<th>Sex</th>
<th>0–04 years</th>
<th>05–14 years</th>
<th>15–24 years</th>
<th>25–34 years</th>
<th>35–44 years</th>
<th>45–54 years</th>
<th>55–64 years</th>
<th>65 years +</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
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<td>179</td>
<td>248</td>
<td>48</td>
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<td>1</td>
<td>2</td>
<td>540</td>
</tr>
<tr>
<td>M</td>
<td>26</td>
<td>189</td>
<td>241</td>
<td>41</td>
<td>20</td>
<td>15</td>
<td>3</td>
<td>2</td>
<td>537</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>368</td>
<td>489</td>
<td>89</td>
<td>41</td>
<td>40</td>
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<td>1077</td>
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<td>% of total</td>
<td>4%</td>
<td>34%</td>
<td>45%</td>
<td>8%</td>
<td>4%</td>
<td>4%</td>
<td>0.4%</td>
<td>0.4%</td>
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</tr>
<tr>
<td>Cumulative cases</td>
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<td>410</td>
<td>899</td>
<td>988</td>
<td>1029</td>
<td>1069</td>
<td>1073</td>
<td>1077</td>
<td></td>
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<tr>
<td>Cumulative %</td>
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<td>38%</td>
<td>83%</td>
<td>92%</td>
<td>96%</td>
<td>99%</td>
<td>99.6%</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

SELECTED PRIORITY DISEASES UNDER WEEKLY SURVEILLANCE: CASES AND DEATHS IN 2009

Cholera, cerebrospinal meningitis, influenza, dysentery and measles dominated the epidemiological situation in the Region from January to September 2009 (Table 4).

Table 4: Reported cases and deaths of selected priority diseases under weekly surveillance in the WHO African Region, 2009

<table>
<thead>
<tr>
<th>Reported health condition</th>
<th>Suspected cases</th>
<th>Deaths</th>
<th>Case fatality rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthrax</td>
<td>15</td>
<td>5</td>
<td>33.33%</td>
</tr>
<tr>
<td>Cholera</td>
<td>195 795</td>
<td>5926</td>
<td>3.03%</td>
</tr>
<tr>
<td>Cerebrospinal Meningitis</td>
<td>86 870</td>
<td>5463</td>
<td>6.29%</td>
</tr>
<tr>
<td>Dysentery</td>
<td>282 461</td>
<td>161</td>
<td>0.06%</td>
</tr>
<tr>
<td>Influenza (any)</td>
<td>61 025</td>
<td>23</td>
<td>0.04%</td>
</tr>
<tr>
<td>Hepatitis</td>
<td>5</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Measles</td>
<td>38 698</td>
<td>307</td>
<td>0.79%</td>
</tr>
<tr>
<td>MonkeyPox</td>
<td>1379</td>
<td>21</td>
<td>1.52%</td>
</tr>
<tr>
<td>Plague</td>
<td>388</td>
<td>25</td>
<td>6.44%</td>
</tr>
<tr>
<td>Rabies</td>
<td>221</td>
<td>83</td>
<td>37.56%</td>
</tr>
<tr>
<td>Viral Hemorragic Fever</td>
<td>17 230</td>
<td>79</td>
<td>0.46%</td>
</tr>
<tr>
<td>Ebola</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Lassa</td>
<td>225</td>
<td>56</td>
<td>24.89%</td>
</tr>
<tr>
<td>Dengue</td>
<td>16 648</td>
<td>9</td>
<td>0.05%</td>
</tr>
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<td>127</td>
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<td>2.36%</td>
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<td>0.00%</td>
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<tr>
<td>Yellow Fever</td>
<td>1165</td>
<td>44</td>
<td>3.78%</td>
</tr>
</tbody>
</table>

Source: Member States Reports, updated 26/11/2009 by DDC/AFRO.

CHOLERA

Cholera has become one of the major endemic diseases in the WHO African Region. From January through October, 5926 deaths were reported out of 195 795 suspected cases (Table 4) with a case fatality rate of over 1% (threshold) in the majority of countries with reported cases (Figure 2). The main risk factors are lack of potable water and poor sanitation. Prevention strategies include improving water and sanitation and health education.
CEREBROSPINAL MENINGITIS

From January through September 2009, 76 612 cases and 4 361 deaths of cerebrospinal meningitis were reported to the Regional Office. The weekly trend of cases is illustrated in Figure 3.

Most of the cases reportedly occurred during the first half of the year. This fact tallies with the epidemic season of the disease in countries of the cerebrospinal meningitis belt. At the peak of the 15th week more than nine thousand cases were reported.

Table 4 shows that meningitis took away 5463 lives during the period covered by this report in 2009, with a case fatality rate of 6.3% (threshold of acceptable = 10%).

Detailed information on cerebrospinal meningitis including age, gender and causal pathogen distribution and anti microbial susceptibility will be shared in the next issue of the CDER.
LEPROSY: SUMMARY OF EPIDEMIOLOGICAL SITUATION IN THE WHO AFRICAN REGION

In 36 countries that reported data for 2008, 31,056 new cases of leprosy were detected: 75% are multibacillary, 10% children, 11% with deformity grade 2 and 36% in women.

The magnitude of leprosy is decreasing in the Region. The prevalence rate was 0.43 cases per 10,000 inhabitants in 2008, down from 0.93 during the year 2000, 0.92 in 2001, 0.86 in 2002, 0.79 in 2003, 0.71 in 2004, 0.63 in 2005, 0.50 in 2006 and 0.46 in 2007. Support is needed to sustain the elimination levels achieved by Liberia, Madagascar and the Comoros (Figure 4).

All countries have expressed the need of a new strategy to maintain leprosy quality care services in order to further dramatically reduce the cost and burden of the disease. The proposed new leprosy elimination threshold is set at 1 case per 100,000 inhabitants at district level.

Figure 4: Prevalence rate of leprosy, by country, end-2008
The 7th Global Conference on Health Promotion was held from 26 to 30 October 2009 in Nairobi, Kenya – the first time a global conference on health promotion has taken place in Africa.

Over 600 experts from more than 100 countries participated in the conference, which issued the Nairobi Call to Action.

The Call identified key strategies and commitments urgently needed for closing the implementation gap in health and development through health promotion.

The Nairobi Call to Action reaches out to WHO and other UN-system partners, international development organizations, governments, politicians and policy-makers at all levels, public, civil society, nongovernmental and private organizations and practitioners, and individuals, families, communities, community-based organizations and social networks.

Seen as an essential, effective approach in line with the renewal of primary care as endorsed by the Executive Board of WHO, the Call aligns with the aspirations of Member States, reflects the vision of the Alma Ata Declaration and supports the recommendations of the WHO Commission on Social Determinants of Health.

A key component of the Call is global commitment: to use the untapped potential of health promotion, make health promotion principles integral to the policy and development agenda, and develop effective and sustainable delivery mechanisms.

The proposed strategies and actions are grouped under the five sub-themes of the Conference: building capacity for health promotion, strengthening health systems, partnerships and intersectoral action, community empowerment, and health literacy and behaviours. Actions across the sub-themes complement one another.

Five urgent responsibilities outlined in the call for governments and stakeholders are:

- Strengthening leadership and work forces
- Mainstreaming health promotion
- Empowering communities and individuals
- Enhancing participatory processes
- Building and applying knowledge.

Addressing the conference on behalf of WHO Director-General Dr Margaret Chan, WHO Regional Director for Africa, Dr Luis Sambo, said: "People's health is affected by different determinants such as income, employment, access to health services, basic education, water and sanitation, housing, gender, culture, lifestyles and other biological, social and economic factors”. Health promotion should play a more prominent role in the implementation of primary care and in responding to the health needs of people, he added.

Also speaking at the conference, Prof Sir Michael Marmot, Chair of the WHO Commission on Social Determinants of health observed that "Social injustice is killing people on a grand scale... We have the resources but do we have the political will?"

Kenya's Vice President Stephen Kalonzo Musyoka said at the closing ceremony of the conference.

“We HAVE NO OPTION BUT TO ANSWER THIS CALL AND GET TO WORK”
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