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REGIONAL STRATEGY FOR IMMUNIZATION DURING THE PERIOD 2003-2005

Report of the Regional Director

EXECUTIVE SUMMARY

1. In 1995, the forty-fifth Regional Committee adopted resolution AFR/RC45/R5 to improve the orientation of the regional EPI strategic plan of action covering the period 1996-2000. Member States developed and implemented national strategies to address the goals of polio eradication, measles control and elimination of neonatal tetanus in the context of the strengthening of national immunization programmes.

2. Substantial progress has been made towards achieving those goals. Poliomyelitis transmission is on the verge of being interrupted; twelve countries have eliminated neonatal tetanus and seven southern African countries sustained measles elimination from 1999 to 2001. However, vaccine-preventable diseases remain major causes of morbidity, disability and mortality, with an estimated 1.1 million deaths occurring annually in the African Region. These deaths are due to (a) the stagnation of routine immunization coverage at low to medium levels; (b) the lack of adequate attention to and support for the implementation of strategies aimed at eliminating neonatal tetanus and reducing measles mortality; and (c) the delay in incorporating the yellow fever vaccine in endemic countries and new vaccines (hepatitis B and Haemophilus type B vaccines) into routine immunization systems. Implementation of regional EPI strategies will need to be accelerated to further reduce deaths from vaccine-preventable diseases while improving the chances of not delaying the certification of polio eradication in the African Region.

3. This document proposes the acceleration strategies needed to attain the EPI targets set for 2005. These strategies are intended to strengthen the implementation of routine immunization, refocus on disease control initiatives and enhance the introduction of new vaccines in the African Region over the next three years.

4. Member States are expected to reach by 2005 higher levels of routine immunization coverage for all EPI antigens; achieve certification of polio eradication; control measles; eliminate neonatal tetanus and introduce new vaccines, all in a sustainable manner.

5. The plan for accelerating the implementation of the regional EPI strategy during the period 2003-2005 contained in this document is submitted to the Regional Committee for adoption.

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INTRODUCTION

1. Vaccine-preventable diseases are still major causes of morbidity, disability and mortality among children in the African region. Poor EPI performance is largely due to civil unrest, lack of resources and poor programme management, resulting in an estimated 1.1 million deaths attributable mainly to measles, *Haemophilus influenzae* type B diseases (Hib), hepatitis B, pertussis, neonatal tetanus, meningococcal diseases and yellow fever.

2. In September 1995, the Regional Committee endorsed resolution AFR/RC45/R5 having considered the proposed strategies and activities for each epidemiological bloc, as part of the regional EPI plan of action for 1996-2000. This plan marked a shift towards identifying programme priorities in terms of measurable disease control objectives rather than only vaccination coverage.

3. Thus, Member States have embarked on the implementation of specific interventions aimed at achieving disease control (e.g. polio eradication, elimination of neonatal tetanus, accelerated measles control), including the implementation of supplemental vaccination (e.g. National Immunization Days) and expansion of enhanced surveillance activities, with a strong laboratory component where needed.

4. Nevertheless, from the lessons learnt in the implementation of various EPI initiatives since the 1980s (e.g. Universal Child Immunization –UCI-;[1] polio eradication), it has become obvious that strengthened immunization systems are the foundation on which improved performance of the regional EPI rests. Consequently, the coordination mechanisms established at country level for support to polio eradication will be used to support a broader EPI agenda.

5. The present document outlines the EPI targets set for the period 2003-2005 and proposes acceleration strategies that governments and stakeholders in immunization in the African Region should implement. Acceleration of implementation of regional EPI strategies is needed to further reduce deaths from vaccine-preventable diseases while improving the chances of not delaying the certification of polio eradication in the African Region.

SITUATION ANALYSIS

Routine delivery of immunization services

6. During the late 80s immunization coverage reached a peak following the Universal Child Immunization (UCI) initiative. This increasing trend continued during the 1990s in only 18 Member States, representing 31% of the regional population. From 1995 to 2000, 21 of the 46 Member States, accounting for nearly 67% of the Regional population, reported a declining trend in immunization coverage of at least 5%. Important declines in coverage were observed in Equatorial Guinea, Gabon, Ethiopia, Uganda, Madagascar, The Gambia, Guinea-Bissau, Mauritania, Senegal and Togo. On the other hand, several countries with large populations (Nigeria, Democratic Republic of Congo, Ethiopia) and most countries in Central Africa reported DPT-3[2] coverage levels below 50% in 2000.

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[1]Defined as 80% of infants receiving all routine EPI antigens by their first birthday globally.
[2]Defined as receiving three well-spaced doses of Diphtheria-Pertussis-Tetanus toxoid vaccine.

7. While there are specific local reasons for these changes, the following issues may have had a greater effect on the observed low to medium programme performance:

(a) routine EPI has not benefited from global and national institutional attention over the past decade and therefore has not been given the level of priority it deserves;

(b) civil unrest continues in many countries in Africa. The OAU estimates that in 1999 civil conflicts were ongoing in 22 countries with civilians making up 90% of the victims; the countries affected represent approximately 40% of the Region's population;

(c) in some countries, there have been fewer financial resources available for routine services due, in part, to changes in donor priorities; consequently, essential activities such as out-reach services, training and supervision have ceased or decreased; and

(d) the high quality of management that had been achieved by EPI has not been maintained. In some cases, EPI staff are not receiving the same level of training and in others the training has emphasized other aspects of EPI (such as supplemental vaccination and disease surveillance) than routine immunization.

Magnitude of vaccine-preventable diseases

8. Measles remains the leading cause of mortality, accounting for nearly half of the 1.1 million deaths attributable annually to vaccine-preventable diseases (see Table 1). The major disease burden occurs in pre-school children in West and Central Africa where immunization is generally low. Inadequate financing is the main barrier to overcome in achieving measles control in Africa. Proven effective strategies have been implemented successfully in seven southern African countries where measles mortality has been reduced to zero over a period of three years.

Table 1: Estimates of yearly deaths due to vaccine-preventable diseases in the African Region[3]

Diseases	Number of deaths
Measles	454,000
Haemophilus influenzae type B	100,000-160,000
Hepatitis B related diseases	150,000
Pertussis	106,000-199,000
Maternal and Neonatal tetanus	110,000
Meningococcal disease	30,000-50,000
Yellow Fever	20,000-30,000

9. Strategies to control maternal and neonatal tetanus are also well understood and some countries are moving forward with their implementation, by targeting interventions initially in the districts most at risk of the disease. Support from UNICEF has been forthcoming and it is likely that the disease incidence of 12 per 1 000 live births (still high) will be reduced in the coming years.

[3]WHO World Health Report, 1999.

10. In 2000 and 2001, West Africa experienced major outbreaks of yellow fever that have even affected large urban areas in Guinea and Côte d'Ivoire. With improved surveillance, yellow fever cases were detected in many other countries (Burkina Faso, Côte d'Ivoire, Ghana, Guinea, Liberia). Control activities have been hampered mainly by the inadequate supply of vaccines and insufficient funding.

New vaccine introduction

11. The disease burden of hepatitis B and *Haemophilus influenzae* type B is well established in Africa (Table 1) but not well known. By the end of 2001 six countries had added hepatitis B vaccines and only one Hib vaccine into their routine EPI. With assistance from the Global Alliance for Vaccines Initiative (GAVI) and the Vaccine Fund, many more countries have been granted funds for the procurement of these new vaccines that will be introduced soon.

GOAL AND OBJECTIVES

Goal

12. The goal is to accelerate the implementation of EPI activities in the African Region in order to improve the health of children.

Objectives

13. The objectives of the acceleration are:

(a) to optimize the delivery of sustainable, quality immunization services;

(b) to accelerate efforts to achieve polio eradication, measles control, neonatal tetanus elimination and yellow fever control; and

(c) to accelerate the introduction of new vaccines and appropriate technologies, into national immunization programmes in a sustainable manner.

TARGETS

14. The following targets will be used during the acceleration period:

Strengthening of the immunization system

15. By the end of 2005:

(a) at least 80% of the countries will attain a minimum DPT3 coverage of 80% in all districts;

(b) 100% of immunization injections used in all countries will be safe; and

(c) all countries will be able to sustain financing of EPI, particularly by increasing government funding through a budget line for vaccines and immunization in the national health budget.

Accelerated disease control

Polio eradication

16. (a) by the end of 2003, there will be no cases of acute flaccid paralysis due to the wild poliovirus in the Region; and

(b) by the year 2005, the process of independent certification of polio-free status will lead to full regional certification.

Measles control

17. By the year 2005:

(a) countries with low routine measles coverage (<50%) and presumed high mortality (CFR >4%)[4] will reduce measles morbidity by 90% and measles mortality by 95% (in comparison with pre-vaccine era figures);[5]

(b) countries with moderate measles routine coverage (50%-75%) and presumed low/medium mortality (CFR 0.5%-4%) will reach and maintain near zero measles mortality; and

(c) countries with high routine measles coverage (>75%), and presumed low mortality (CFR <0.5%) will eliminate indigenous transmission of the measles virus.

Maternal and neonatal tetanus

18. By the year 2005:

(a) at least 80% of the countries will attain a neonatal tetanus incidence rate of less than one case per 1,000 live births in every district (adjusted or from surveys); and

(b) at least 80% of the countries will attain a minimum of 80% TT2+[6] coverage among pregnant women in every district.

Yellow fever

19. By the year 2005, countries at risk of yellow fever will:

(a) increase routine yellow fever immunization coverage to at least 80%; and

(b) conduct emergency response for all confirmed cases of yellow fever within three days following laboratory confirmation.

Innovations

New vaccines

20. (a) by the end of 2003, all countries will have been supported to include the hepatitis B vaccine in their national immunization programmes and by the year 2005, half of the countries will be supported to include *Haemophilus influenzae* type B vaccine; and

(b) by the year 2003, all countries will adopt auto-destruct syringes or any equally safe injection technologies (such as UNIJECT) for all immunization injections.

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[4]Defined as Case Fatality Rate.

[5]It is not possible to put an exact date on the start of immunization in each country, but it has been assumed that this was 1980 in most developing countries.

[6]Defined as receiving at least two well-spaced doses of tetanus toxoid during pregnancy.

STRATEGIES FOR ACCELERATION

Enhancing political commitment

21. Enhanced political commitment at country-level will be obtained through:

(a) the establishment of a line item in the national health budget for the procurement of vaccines and for operation costs;

(b) the involvement of Parliament to secure the right of every child to be immunized as part of the comprehensive rights of the child; and

(c) the use of immunization coverage as an indicator of equity of access to health services.

Promotion of sustainable advocacy, communication and social mobilization

22. Acceleration will be obtained through:

(a) high-level political commitment to immunization;

(b) improved partnerships through meetings of the interagency coordination committees (ICCs); and

(c) enhanced community involvement in immunization.

Development of national and district level planning

23. Countries will produce multi-year plans and annual work plans for EPI based on district level microplanning. Such plans must be endorsed at meetings of interagency coordination committees (ICCs).

Establishment of coordination mechanisms for EPI partners

24. The national ICC will be the forum for coordinating partner support for acceleration of EPI.

Ensuring capacity building and training at country level

25. Acceleration of training and capacity building will be obtained through:

(a) development of annual and five-year EPI strategic staffing plans; and

(b) strengthened pre-service and in-service training, and personnel management.

MAJOR INTERVENTIONS

Strengthening of the immunization system

Delivery of quality immunization service

26. Countries will support local level efforts, notably by paying attention to the vaccination schedule, organizing immunization sessions at fixed and outreach posts, ensuring immunization injection safety, encouraging the use of child health cards, and encouraging health workers to communicate relevant EPI information to mothers. Through training and support supervision, health workers at all levels will be encouraged to analyze and use immunization data locally to improve programme performance.

Logistics

27. Over the next three years logistics will be enhanced through optimized vaccines procurement and management, improved cold chain and transport management, injection safety, and improved waste management and disposal.

Programme management

28. Supervision, monitoring and evaluation, especially at provincial and district levels, will form the basis for improving the implementation of activities included in the national plan and district micro-plans for EPI.

Accelerated disease control

Eradication of poliomyelitis

29. Acceleration of the implementation of the polio eradication initiative (PEI) in the African Region will be achieved by:

(a) increasing the use of synchronized NIDs through the house-to-house strategy;
(b) attaining and sustaining certification-standard Acute Flaccid Paralysis (AFP) surveillance in all countries; and
(c) accelerating the certification of polio eradication activities including the strengthening of laboratory containment of wild polioviruses.

Neonatal tetanus elimination

30. Over the next three years, elimination of neonatal and maternal tetanus will be achieved by:

(a) providing supplemental tetanus toxoid (TT) immunization for women living in high-risk districts;
(b) promoting clean delivery practices;
(c) attaining and sustaining at least 80% TT2+ routine vaccination coverage among pregnant women;
(d) integrating neonatal tetanus surveillance into AFP surveillance in all countries; and
(e) conducting mortality surveys for documenting the certification of elimination of NNT.

Measles and yellow fever control

31. Over the next three years, acceleration of measles and yellow fever control will be achieved through the:

(a) integration of yellow fever vaccination into routine immunization in all "at-risk countries";[7]
(b) establishment of buffer stocks of at least one million doses of yellow fever vaccines for the Region for rapid shipment to countries that experience outbreaks;
(c) establishment of national laboratory capability for yellow fever IgM testing linked to a measles laboratory;
(d) attainment of routine measles coverage of at least 80% by the end of 2005;

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[7]Defined as a district in a highly endemic area having a history of reported cases/outbreaks in the past five to 10 years and low yellow fever coverage.

(e) provision of supplemental measles immunization in order to give children a second opportunity to be immunized against measles; the target age will be chosen based on the country measles epidemiology, with the aim of reducing to a very low level the circulation of the measles virus; and

(f) improvement of measles case management and outbreak response activities.

Prevention of vitamin A deficiency

32. Countries will integrate vitamin A supplementation into their routine immunization services by 2004, and vitamin A will continue to be delivered during supplemental immunization activities.

Innovations

Introduction of new vaccines

33. Acceleration of the introduction of new vaccines will be through:

(a) planning, implementation and evaluation of the processes of introducing new and under-used vaccines;

(b) strengthening of surveillance activities under the IDS strategy; and

(c) supplying all GAVI sponsored vaccines together with the required quantities of auto-destruct (AD) syringes. For eligible countries, GAVI will provide AD syringes for all immunizations during a period of three years.

Introduction of new policies and technologies

34. The adoption of a multi-dose vial policy (MDVP) and vaccine vial monitors (VVMs) as routine vaccine management tools will be promoted through capacity building at inter-country and country levels.

Surveillance and laboratory services

Strengthening EPI disease surveillance

35. Acceleration of surveillance will continue to be developed at country and inter-country levels in line with the following strategic principles:

(a) the expansion of AFP surveillance to encompass other EPI diseases within the framework of IDS, including the introduction of case-based surveillance for measles control;

(b) the analysis of data at each level of collection for action in terms of person, place, and time;

(c) the monitoring of timeliness of health facility reporting to the district and timeliness of district reporting to the next level; and

(d) preparedness for the introduction of new vaccines through planning for sentinel surveillance for hepatitis B and *Heamophilus influenzae* type B, pneumococcus, Group A meningococcus.

Strengthening laboratories to support surveillance services

36. The current polio laboratory network will serve as the basis for the establishment of other laboratory networks for the IDS strategy within the next three years. By the end of 2005, Member States will have developed laboratory services capable of timely and reliable confirmation of the aetiology of suspected diseases and outbreaks.

IMPLEMENTATION PROCESS

37. In order to accelerate the implementation of EPI in countries, they will be supported:

(a) to expand or create national ICCs for EPI;
(b) to prepare five-year strategic plans and annual plans; and
(c) to focus implementation on the district level.

Each district will have a microplanning process for implementation of its activities.

38. All the three main components of EPI (strengthening of the immunization system, accelerated disease control and innovations) will be implemented simultaneously where possible. District microplans and national plans will be used for resource mobilization.

Role of countries

39. Member States should own the acceleration process, strengthen human capacity and mobilize financial resources for national immunization programmes, with greater emphasis on improving the quality of service delivery and coverage in each district. Countries will coordinate the activities of partners in this process.

Role of WHO

40. WHO will provide technical support to countries, whenever it is needed, for the implementation, monitoring and evaluation of EPI.

Role of partners

41 The Task Force on Immunization (TFI) will be the forum for the coordination of partner support. More partners will be encouraged to join the TFI and invest more in EPI.

MONITORING AND EVALUATION

42. In the period 2003 to 2005, countries will adapt comprehensive monitoring tools for EPI consistent with the health information management system at country level. Surveillance data will continue to guide programme decisions. Enhanced disease surveillance with its laboratory component will provide the data to measure progress, and eventually target infected areas with mopping-up vaccination strategies. The Task Force on Immunization (TFI) and the African Region Interagency Coordination Committee (ARICC) annual meetings will serve as forums for annual monitoring and direction for regional immunization activities.

CONCLUSION

43. Member States are expected to reach by 2005 higher levels of routine immunization coverage (measured by 80% DPT-3 coverage in each district) for all EPI antigens, achieve certification of polio eradication; eliminate neonatal tetanus; control measles and yellow fever and introduce new vaccines, in a sustainable manner.

44. The plan for accelerating the implementation of the Regional EPI strategy during the period 2003-2005, contained in this document, is submitted to the Regional Committee for adoption.