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**A good start for every child****UNICEF programming to improve immunization services and child health, reduce the burden of vaccine-preventable disease and eradicate polio***Summary*

Immunization is one of the most cost-effective and “do-able” public health interventions that saves the lives of 3 million children each year and can save 2 million more. Furthermore, immunization contributes to improved human development and the reduction of poverty by preventing disease, increasing the learning capacity of children and reducing health care expenditures of families. With new vaccines against major diseases of public health importance under way, strengthening immunization services will be even more important for child survival and development.

UNICEF is committed to collaborating with partners in Government, communities, the private sector, United Nations agencies, development agencies and non-governmental organizations (NGOs) to support the development of immunization systems as part of integrated approaches to ensure “a good start for every child”.

UNICEF programming in the area of immunization combines vitamin A supplementation as an integral component of immunization services. UNICEF directs support to countries in strengthening routine immunization, eradicating polio, eliminating maternal and neonatal tetanus, and reducing measles mortality, with a focus on countries with low coverage and/or high disease burden. Responding to emergencies to ensure timely immunization and vitamin A supplementation is part of

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\* E/ICEF/2001/7.



UNICEF immunization activities. (For further information, there is a UNICEF web site ([www.unicef.org](http://www.unicef.org)) and links from this web site to other immunization-related sites.)

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## **I. The UNICEF commitment**

1. UNICEF is committed to ensuring “a good start for every child”, by strengthening immunization services as part of an integrated approach to survival and development in early childhood. Immunization programmes save the lives of 3 million children every year, and improved immunization services for infants and mothers could save the lives of 2 million more children and prevent 1 million premature deaths in adulthood every year. Through strengthening immunization services, UNICEF is also contributing to overall health and nutrition and, thereby, to longer-term poverty reduction and the realization of children’s rights.

2. UNICEF continues to strengthen its strategic and programmatic collaboration with the World Health Organization (WHO). The strong partnership emphasizes coordination, collaboration and complementarities, especially at country level, with support at regional and global levels.

3. UNICEF is committed to collaborating with Global Alliance for Vaccines and Immunization (GAVI) partners at country, regional and global levels to bring immunization services to children as part of sustainable basic health services, and to reduce the burden of vaccine-preventable diseases. GAVI is the kind of partnership that will enable the Global Movement for Children to bring about measurable change in the lives of children in one generation.

4. UNICEF, along with the Global Polio Partners, is committed to support efforts to eradicate polio and certify that the world is polio free by 2005.

5. UNICEF is committed to support efforts to eliminate maternal and neonatal tetanus (MNT) from every country by 2005. Every year 215,000 newborns and 30,000 mothers die from MNT, mostly in 27 countries in Africa and Asia, and almost 900,000 children still die every year of measles.

6. UNICEF is committed to support global efforts to reduce measles mortality, the leading cause of vaccine-preventable child mortality, by one half by 2005.

7. UNICEF is providing programme support of approximately \$100 million per year for immunization services to ensure a child’s right to achieve the highest attainable standard of health. Immunization will be among the few organizational priorities that will be identified in the medium-term strategic plan (MTSP) for 2002-2005.

8. UNICEF will continue to maintain and strengthen its longstanding efforts to ensure affordable health commodities for women and children. As a global leader in vaccine supply, both for its own activities and GAVI, UNICEF is committed to developing innovative means of expanding its capacities to supply a wider range of commodities.

## **II. Strengthening immunization services**

9. UNICEF has prioritized programme support in immunization to the poorest countries, with attention to those with the weakest immunization programmes and highest burden of vaccine-preventable diseases. In essence, UNICEF has been aiming to assist in the development of national and local capacities within countries in order for children to achieve the highest attainable level of health, thereby

ensuring “a good start for every child”. Thus, UNICEF is contributing to building sustainable national health systems through the strengthening of immunization services.

10. Within each country, attention has been given to low performing districts so as to reach the target of at least 80 per cent coverage in every district. This approach was introduced in 1999 as a way of pursuing both higher coverage and equity. Although specific UNICEF support must depend on the country situation, the following areas have been important to UNICEF immunization programming:

(a) Identifying reasons for low coverage and supporting micro-planning by local and district teams to overcome the obstacles;

(b) Capacity-building of local governments and communities for participation in planning, implementation and monitoring;

(c) Improving vaccine management to reduce wastage and stock-outs, and to enable better forecasting for vaccines, and injection and cold-chain equipment;

(d) Improving monitoring of performance. As partners in GAVI, UNICEF and WHO are collaborating in reviewing the quality of data on immunization coverage; and developing ways to build in-country capacity to improve it, including developing new tools that will enable managers, as well as independent reviewers, to check the reliability of data;

(e) Improving injection safety. UNICEF, together with WHO, has been advocating for national Governments and funding partners to adopt the WHO/UNICEF/United Nations Population Fund (UNFPA)/International Federation of Red Cross and Red Crescent joint policy statement on injection safety. This policy calls for all immunization programmes to use only auto-disable syringes by the end of 2003. All countries applying to GAVI for resources from the Global Fund for Children’s Vaccines are required to develop injection safety plans. The plans indicate the actions to be taken to comply with the joint policy, including promoting behaviour change and addressing waste management issues;

(f) Advocating to ensure sufficient government budget allotment for basic immunization services as well as to ensure adequate and stable external support;

(g) Advocating for the introduction of appropriate new vaccines into the immunization schedule;

(h) Promoting appropriate child-care practices at the household level to increase demand for and use of immunization services, including reducing drop-outs. Communication/social mobilization with families is an essential strategy to achieve this;

(i) Promoting birth registration to create a platform for reaching and accessing all children, and maintaining a system for follow up;

(j) Supporting the development and operationalization of innovative mechanisms to bring immunization services to hard-to-reach communities. Innovations include the development of sustainable outreach services and child health days that provide locally appropriate interventions, immunization and vitamin A supplementation, together with health promotion;

(k) Advocating for quality antenatal care for all pregnant women.

11. Recent progress has contributed to providing children with “a good start”. For example, in Uganda, more children are now being protected from vaccine-preventable diseases owing to the strengthening of routine immunization, which succeeded in reversing the 1995-1999 backslide in immunization coverage.

### **III. Supply management as a component of strengthening immunization services**

12. UNICEF has been strengthening supply services as a strategy to increase access to affordable, quality immunization services. UNICEF has been working with Governments, industry, in both industrialized and developing countries, WHO and other partners to continue building intelligence about the vaccine market and best commercial practices.

#### **A. UNICEF is the largest buyer of vaccines**

13. As of 2000, UNICEF supplied over 2.4 billion doses of vaccines to developing countries. Through procurement using UNICEF programme funds as well as through procurement services for Governments and donor agencies, UNICEF supplies vaccine for over one half of the world’s children. The value of vaccines and safe injection equipment supplied through UNICEF exceeds \$100 million annually. Yet the value of vaccines supplied through UNICEF is equal to less than 8 per cent of the world’s expenditure on vaccines because UNICEF traditionally has purchased only vaccines that have been in the market for a substantial period of time and, thus, are less expensive.

14. As the world’s largest buyer of vaccines, UNICEF is in a unique position to influence industry decisions, research and development, and to improve the quality of support to countries’ supplies of vaccines received through UNICEF. However, the fact that UNICEF vaccine expenditures govern only a small percentage of the value of the market makes managing vaccine supply complex and challenging.

15. By strengthening its expertise in vaccine supply services, UNICEF is in a unique position to be a “pathfinder” for supplying and introducing other health commodities.

#### **B. The UNICEF supply role in the Global Alliance for Vaccines and Immunization**

16. On behalf of GAVI, UNICEF will supply an estimated \$600 million of “underused” vaccines over five years for up to 40 million children. “Underused” vaccines are those currently in use as opposed to “new vaccines”, which are being developed. The alliance has decided to support the following three types of vaccines: *Haemophilus influenzae* b (Hib), an important cause of pneumonia and meningitis; hepatitis B, which infects young children, causing liver cancer later in life; and yellow fever, where appropriate.

### **C. UNICEF continues to study factors influencing the supply of vaccines**

17. In recent years, high income countries (HICs) (with a gross national product per capita greater than \$9,500) have introduced new vaccines in their immunization schedules, and their routine vaccine schedules are now different from those in developing countries. Traditionally vaccine producers have largely followed the demand of HICs. In the past 18 months, there has been a rapid shift away from traditional expanded programme on immunization vaccine production, leading to difficulties in securing sufficient amounts of vaccines for developing countries.

18. Disease control and eradication initiatives have increased the overall demand for some vaccines. For example, polio eradication activities have greatly increased the demand for oral polio vaccine. Similar trends are expected in the demand for measles and tetanus toxoid vaccines.

19. It takes 18-24 months to produce vaccines. Substantial increases in production, requiring new production facilities, take much longer due mainly to regulatory requirements to register and qualify the new facilities for production. Thus, when supply and demand are close to equilibrium, the production cannot respond to sudden changes in demand. In fact, it may take some years before production can respond to demand.

20. In order to ensure the continued and reliable supply of affordable vaccines, accurate forecasting of requirements as well as reliable and stable financing are essential. The expected increases in demand and the differences in vaccines used in industrialized and developing countries make it important for UNICEF to be able to guarantee manufacturers longer-term contracts. Thus, UNICEF will need to work with Governments of both donor and developing countries to establish a mechanism that will allow such longer-term commitments.

## **IV. Participation in the Global Alliance for Vaccines and Immunization**

21. GAVI is a new private/public partnership seeking to fill three gaps in preventing the vaccine disease burden. The allies in GAVI aim to ensure that all 30 million children still not receiving vaccinations will get these services; that as new life-saving vaccines are developed, children in developing countries will also benefit from them; and that the development of vaccines against diseases most prevalent in poorer countries, including pneumonia, diarrhoea, HIV/AIDS, malaria and tuberculosis, is encouraged. UNICEF will contribute to the GAVI goals by:

(a) Defining the vision and operational strategies of the initiative, together with its partners, through participation on the GAVI Board, the Working Group, task forces and regional working groups. UNICEF will also provide space and administrative support to the GAVI Secretariat. The Executive Director of UNICEF will assume the Chair of the Board for a period of two years beginning in mid-2001;

(b) Increasing advocacy and communication in support of immunization, including leading the Task Force on Advocacy and Communication, and supporting implementation of the GAVI advocacy and communication work plan;

(c) Assisting national Governments, through its country programmes of cooperation, to improve the management and delivery of immunization services as well as the demand for these services;

(d) Improving sustainability of immunization programmes by expanding the Vaccine Independence Initiative, which offers advocacy support, technical assistance, support to UNICEF supply services and, if needed, a credit mechanism with the possibility for repayment in local currency;

(e) Providing technical and programmatic support to countries receiving vaccines or cash grants from the Global Fund for vaccines, as recommended by the GAVI Board;

(f) Using its experience in vaccine supply to undertake the supply activities of the alliance.

22. The alliance partners have requested that the Global Fund for Children's Vaccine Trust Account be managed by UNICEF. It is expected that \$150 million from the Gates Foundation, and at least an additional \$150 million in matching funds from other donors, will flow annually through this account. Over \$1 billion of new funding will be needed over the next five years to add the immunization of all children in the poorest countries against hepatitis B, Hib and yellow fever, as well as against pneumococcus, which is expected to become vaccine preventable in developing countries soon.

## **V. Polio eradication**

23. Significant progress was made towards polio eradication in 2000 (see the report of the Executive Director (E/ICEF/2001/4 (Part II)) through extensive efforts by polio-endemic countries, in collaboration with the Global Polio Partners (especially, WHO, the United States Centers for Disease Control and Prevention (CDC) and Rotary International). Progress achieved included:

(a) A 65 per cent decline in polio cases from approximately 7,100 in 1999 to approximately 2,800 in 2000;

(b) A decrease in the number of polio-endemic countries from 30 beginning in 2000 to an estimated 20 by the end of the year.

24. Polio eradication is another example of a successful and powerful partnership in which UNICEF is engaged in the field of immunization. Collaboration, coordination and complementarities with WHO are essential. Support and collaboration with CDC as well as the vaccine industry have been important. Above all, the remarkable contribution of Rotary International and volunteer Rotarians at both global and field levels has been a pathfinder in private/public partnerships.

25. The UNICEF role in efforts to certify the world polio free by 2005 are:

(a) To support countries to develop communication strategies to mobilize communities and households to immunize children against polio and other vaccine-preventable diseases as well as to utilize vitamin A supplements;

(b) To support central and district health teams in the micro-planning of activities;

(c) To support advocacy and social mobilization at country, regional and headquarters levels;

(d) To engage in dialogue with vaccine manufacturers, monitoring the vaccine supply situation as well as the supply of vaccines and cold-chain equipment;

(e) To support countries in emergency and/or conflict situations through the presence of staff at strategic sub-offices who support implementation activities, including vaccine distribution logistics and dialogue to establish “days of tranquillity”.

26. Although significant advances have been made in achieving the goal of eradicating and certifying polio by 2005, several challenges still need to be addressed:

(a) Access to immunization services in emergency/conflict areas;

(b) Political will and commitment to immunize entire populations;

(c) Continued funding commitment until certification.

27. To continue to call, at the highest political level, for commitment by polio-endemic countries and donor countries to the target date for polio eradication, UNICEF and WHO, together with CDC and Rotary International, organized the Global Polio Partners’ summit on 27 September 2000 at United Nations Headquarters. This event brought together more than 350 individuals from polio-endemic countries, donor agencies, foundations, the private sector, organizations of the United Nations system, NGOs and humanitarian groups. The Summit was opened by United Nations Secretary-General Kofi Annan. Dr. Gro Brundtland, Director-General of WHO, launched the Global Polio Eradication Initiative Strategic Plan 2001-2005, and the participants endorsed a joint pledge to overcome the three challenges towards the successful global eradication of polio and certification of the world polio free by 2005.

28. For the last phase of eradication, UNICEF is committed to intensifying support and activities in countries where extra efforts are necessary to reach the goal of global certification by 2005. These countries are Afghanistan, Angola, the Democratic Republic of the Congo, Ethiopia, Nigeria, Pakistan, Somalia and Sudan. UNICEF, WHO and other partners have played a key role in ensuring “days of tranquillity” in Afghanistan and other conflict-torn areas to ensure successful National Immunization Days.

## **VI. Elimination of maternal and neonatal tetanus**

29. The goal of reducing neonatal tetanus cases to fewer than 1 case per 1,000 live births in every district of every country was declared at the World Health Assembly in 1989. The World Summit for Children in 1990 endorsed the goal to eliminate neonatal tetanus by 1995. Maternal tetanus, a disease of mothers that is directly related to neonatal tetanus, has now been added to the elimination goal. This inclusion recognizes that tetanus threatens mothers as well as babies during pregnancy and delivery, and that the elimination of tetanus benefits them equally.

30. Progress was made in 2000, as over 12 million women at risk were immunized with tetanus toxoid, a vaccination against MNT. UNICEF, at global, regional and



country levels, has provided technical as well as financial support for MNT elimination activities. Significant progress towards eliminating MNT already has been achieved in countries such as Bangladesh, Chad, Ethiopia, India, Myanmar and Yemen.

31. The strategy for progress in the elimination of MNT, as recommended jointly by WHO, UNFPA and UNICEF is:

(a) In high-risk districts/areas where women have not been reached by immunization services, conduct supplemental immunization activities to vaccinate at least 90 per cent of all women of child-bearing age with three properly spaced doses of tetanus toxoid vaccine;

(b) Maintain elimination in formerly high-risk districts by routinely vaccinating pregnant women through fixed sites, outreach or other methods.

32. The focus of global efforts with respect to MNT is now on the 57 countries that, as of mid-2000, have not yet eliminated MNT in all districts. While 22 of these countries are expected to reach the goal soon, many will require more time and special strategies to deal with accessibility problems characterized by limited or lack of immunization services, antenatal care and skilled birth attendants.

## **VII. Reducing measles mortality**

33. Although annual reported measles incidence declined by two thirds between 1990 and 1999, it is estimated that over 30 million cases and 875,000 deaths from measles still occur every year. This represents 45 per cent of the estimated 2 million deaths caused annually by vaccine-preventable diseases in childhood. Long-term commitment is required to reduce measles mortality in a sustained manner. Special efforts are needed in some 23 countries, which account for over 85 per cent of all child deaths due to measles.

34. In the past year, UNICEF collaborated with WHO and other partners to develop a joint strategy to further reduce measles mortality by 50 per cent worldwide by 2005. This strategy, which was launched jointly by WHO and UNICEF in March 2001, calls for countries to:

(a) Provide the first dose of measles vaccine to successive cohorts of all children at age nine months or shortly after;

(b) Guarantee a "second opportunity" for measles vaccination, either through supplementary immunization activities or routine immunization;

(c) Establish an effective system to monitor coverage and conduct measles surveillance, with the integration of epidemiological and laboratory information;

(d) Improve the management of measles cases, including adequate supplementation with vitamin A.

35. UNICEF programmes will support countries in carrying out these strategies, as appropriate, through support to activities such as:

(a) Assessing progress on measles control;

(b) Identifying reasons for low routine coverage in certain districts and/or nationally;

(c) Developing a three to five year plan for measles mortality reduction as part of their overall immunization service development plan;

(d) Implementing strategies to improve routine coverage, to conduct supplementary immunization and vitamin A supplementation activities where needed, and to mobilize communities and household in the area of measles control.

## **VIII. Immunization in emergencies**

36. During complex emergencies that result in displacement, existing immunization services become disrupted, leaving the youngest and most vulnerable children unprotected, especially against measles, an often-deadly disease under such conditions. Emergencies have a disproportionate effect on disadvantaged population groups whose pre-emergency vaccination rates as well as nutritional status are often below the national average. Support to immunization, in particular to measles vaccination, and to vitamin A distribution in emergency situations is, therefore, an essential component of UNICEF immunization strategies.

37. Successes have been noted during emergencies/conflicts in East Timor and Guinea, where collaborative efforts between UNICEF, other United Nations agencies, bilaterals and international NGOs to immunize children against measles resulted in preventing epidemics in these high-risk areas.

38. A coordinated and rapid response is essential to contain outbreaks of meningitis and yellow fever. UNICEF participates in inter-agency coordinating groups organized by WHO on meningitis and yellow fever for vaccine supply management. Financial as well as managerial challenges remain in conducting vaccination campaigns to contain outbreaks of meningitis and yellow fever in parts of Africa and Japanese encephalitis in parts of Asia.

## **IX. Conclusions**

39. The underpinning of all strategies to reduce the burden of vaccine-preventable diseases is the sustained provision of good quality routine immunization services which are demanded, planned, managed, monitored and implemented in partnership with communities. These routine services must be complemented with supplemental immunization activities to achieve an adequate and timely reduction of the disease burden, especially among the most disadvantaged populations.

40. To fulfil its mandate to provide quality support to Governments and communities in developing sustainable immunization services, UNICEF will:

(a) Strengthen the capacity of regional and country offices to support the planning, implementation and monitoring of immunization and integrated outreach activities;

(b) Make resources from global initiatives available at local level in an efficient manner;

(c) Develop further the existing strength of UNICEF in supply operations, communication and advocacy;

(d) Ensure its full participation in global policy development for GAVI, MNT, measles, and “underused” and new vaccines.

41. To contribute, through support to strengthening immunization systems, to global development targets on child mortality reduction, UNICEF is cognizant of the challenges, such as the increased incidence of civil strife and substantial resource needs related to reaching the hardest to reach children. To overcome such challenges, partnerships for coordination and collaboration are essential. UNICEF will continue to collaborate with WHO and other United Nations agencies, bilateral donors, research institutions and NGOs in support of immunization programmes as part of integrated approaches to ensure “a good start for every child”.

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