Reaching Every District Strategy Implementation in the Africa Region

Evaluation Report

June 2005

World Health Organization

USAID

CDC

unicef

REACHING EVERY DISTRICT STRATEGY IMPLEMENTATION
IN THE AFRICA REGION

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Acknowledgement

Thanks and appreciations to all who contributed in one form or another in making this evaluation possible. Special thanks to the country programs, most especially the EPI Mangers, the district health management teams who facilitated the organization of the evaluation in their respective districts and the health workers who generously provided support and needed information to the evaluation teams.

We would like to acknowledge the meaningful contributions of the partner agencies (CDC, UNICEF USAID, and WHO at all levels).

Acronyms

AFRO	-	WHO Regional Office for Africa
CDC	-	Centers for Disease Control and Prevention
DRC	-	Democratic Republic of Congo
CVP	-	Children Vaccine Program
GAVI	-	Global Alliance for Vaccines and Immunization
RED	–	Reaching Every District
UCI	-	Universal Childhood Immunization
UNICEF	-	United Nation Children's' Fund
USAID	–	United States Agency far International Development
VPDs	-	Vaccine Preventable Diseases
WHO	-	World Health Organization

Executive Summary

A renewed interest in routine immunization among key immunization partners to address common obstacles to increasing immunization coverage led to the development of the "Reaching Every District (RED) Strategy". The first steps were taking during a meeting of partners in 2002 at a meeting of immunization partners (WHO, UNICEF,CVP, USAID,CDC) which recognized the importance of district focus on immunization and identified the five RED operational components:

The RED strategy has five operational components:

1. Planning and management of resources - *better management of human and financial resources*
2. Supportive supervision - *on site training by supervisors*
3. Re-establishment of outreach services - *regular outreach for communities with poor access*
4. Community links with service delivery - *regular meetings between community and health staff*
5. Monitoring and use of data for action - *chart doses, map population in each health facility*

Since 2002, many countries have been provided with technical and financial support to implement the RED strategy. By 2005, twenty-six countries in the African region, and many other countries in other regions had commenced implementation.
This evaluation report, in which most of the original partners participated, describes the processes and results of RED strategy implementation in five countries of the African Region (DR Congo, Ethiopia, Madagascar, Kenya, and Zimbabwe). The year 2002 was taken as the base year for comparison.

Objectives of the Evaluation

- Evaluate implementation of RED strategy in each country and review progress towards improving coverage
- Collect quantitative and qualitative data from national, district and health facility levels
- Document lessons learnt from implementation to feed into the fine-tuning of the RED strategy, guidelines and tools
- Provide a report to the MoH in each country on progress and best practices in implementing the RED

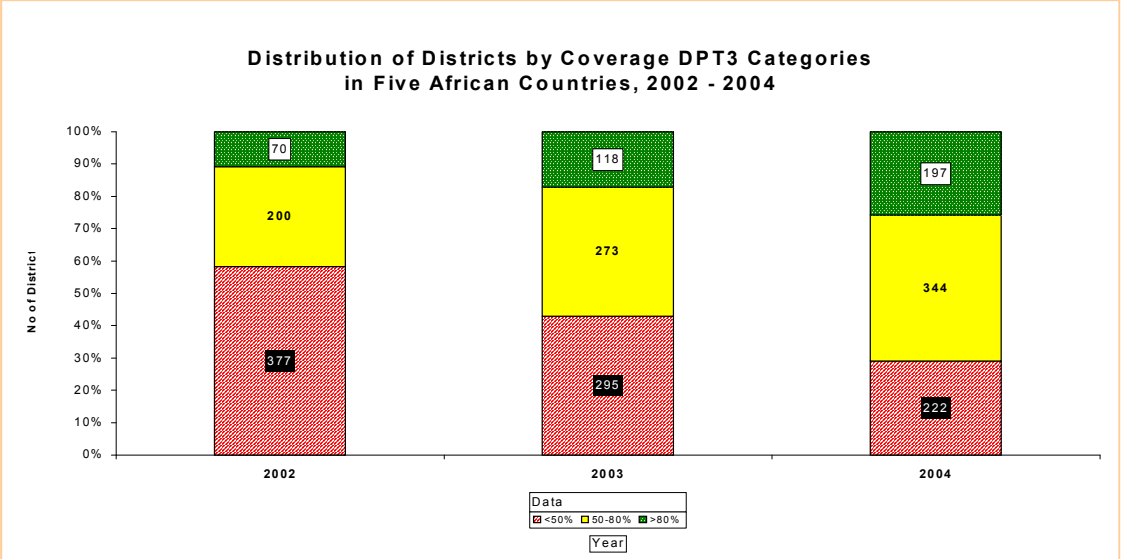
Evaluation Methods and Tools

Protocols and data collection forms were prepared in advance and used during field visits to the five countries. In countries where the RED strategy had not yet been expanded to every district, visits were made to 'RED' districts and others for comparison. Quantitative data were collected and analyzed to determine the changes in immunization coverage over time by district, and between 'RED' and other districts. Interviews were conducted using standardized questionnaires at national, district and at health facility levels. Qualitative information was also analyzed and the key points consolidated to form part of the national report. Each evaluation team debriefed district and national authorities before departure.

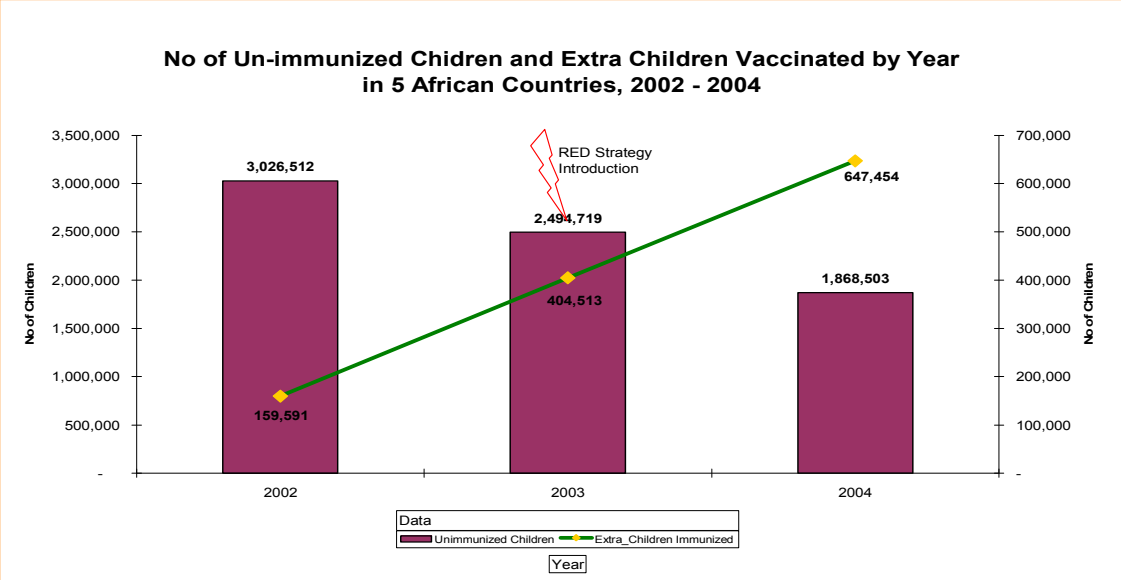
Results

The evaluation revealed remarkable increases in immunization coverage in four of the five countries reviewed. In the fifth country, there was a decline in coverage between 2003 and 2004, however, the decline was due to political factors largely outside the influence of the immunization program and anyway less in the "RED Districts" than in other districts. In the five countries evaluated, between 2002 and 2004, the total number of districts with DPT3 coverage over 80% increased dramatically from 70 to 197, while the number with coverage under 50% declined from 377 in 2002, to 222 in 2004.

The number of additional children vaccinated annually also increased from 159,591 in 2002 to 647,454 in 2004. At the same time, the number of unvaccinated children was almost cut in half, falling from 3 million children in 2002 to 1.8 million in 2004, (see figures I and ii).



Conclusions and Recommendations



This evaluation shows that implementation of the RED strategy results in more children receiving routine immunization. All five components of the RED strategy were adapted and implemented to varying extents in the five countries evaluated. While it may not be possible to say which RED component or what other factor had the greatest influence on increasing coverage, the common factor in all these countries was a focus on micro planning at the district level. The extra resources needed were relatively modest; they were mainly used for training, micro planning workshops, outreach and supervisory costs. The future success of the RED strategy will depend upon these resources being sustained and available at district level.

National governments should expand the continued implementation of the RED strategy to all districts, making the needed resources available for implementation. They should use the opportunity of a district focus to solve the systematic problems including the availability adequate, trained human resources at health facility level.

All immunization partners should encourage all countries to adopt the RED strategy to accelerate and sustain immunization coverage. In so doing, partners should provide consistent technical advice in line with national policy. Among the most useful roles for partners is a collaboration with countries in ensuring resources are available at district level, and building the capacity of health workers to interpret and use immunization data. It is equally important for partners to sustain their support and avoid a short-term project-type approach to implementation of the RED strategy.

Part 1 - Introduction

1.1 Background to the Reaching Every District Strategy and Evaluation Objectives

During the late 1980s and early 1990s, immunization coverage in the African Region increased steadily as countries and international partners intensified efforts to meet the Universal Childhood Immunization (UCI) goals. Once the UCI goals were achieved, there was some decrease in support for routine immunization, resulting in a decline in coverage. By 2000, the alarming numbers of un-immunized children led partners to search for innovative strategies that would accelerate improvement in immunization coverage. The 'Reaching Every District' (RED) was born out of this search. RED is a strategy that builds capacity at district and health facility levels to address common obstacles to increasing immunization coverage.

The first steps towards the RED strategy were taken in July 2002 at a meeting of immunization partners (WHO, UNICEF, CVP, CDC and USAID), where those present identified common obstacles to increasing immunization coverage.

Five operational components were identified:

1. Planning and management of resources
2. Supportive supervision
3. Re-establishment of outreach services
4. Community links with service delivery
5. Monitoring and use of data for action

In early 2003, WHO/AFRO developed and disseminated guidelines and tools for the implementation of the RED strategy, through district micro planning and later in the same year, many countries in the region adopted the AFRO guidelines and started the implementation of the RED strategy.

In 2004, special efforts were made to implement the RED strategy in three of the four largest African countries (Angola, DR Congo, and Ethiopia). In addition, 18 other countries were identified as priorities for WHO assistance in implementing the RED strategy. By July 2005 the number of countries implementing the RED approach in the Africa Region increased to twenty - six (26).

The rationale for this evaluation was to document lessons learned and progress in the RED strategy implementation process. Documenting early experiences gained by countries with the implementation of RED is a part of the strategy implementation framework. This is necessary to guide scale-up of in those countries that have begun implementation and to provide useful lessons for other countries that may wish to do the same in the future.

The objectives of the evaluation were to:

- To evaluate implementation of the RED in each country and review progress towards improving coverage

- To collect quantitative and qualitative data from national, district and health facility levels.

- Document lessons learnt from implementation to feed into fine-tuning of strategy, guidelines and tools

- To provide a report to the MoH in each country on progress and best practices in implementing the RED strategy.

The following report describes the RED strategy implementation experiences and results from an evaluation conducted in June 2005 in five countries of the Africa Region--DR Congo, Ethiopia, Kenya, Madagascar and Zimbabwe.

1.2 RED Strategy Context

Vaccine preventable diseases continue to be major contributors to childhood morbidity and mortality in the Africa Region. Nearly one million deaths from vaccine preventable disease occur every year. Table 1shows an estimate of the distribution of those deaths.

Table 1. Burden of Vaccine Preventable Diseases

Disease	*Mortality Per Year*
Measles	**454.000**
HiB –related diseases	**100.000- 160.000**
Hepatitis B - related diseases	**150,000**
Peruses	**106.000-199.000**
MNT	**110,000**
Yellow Fever	**20,000-30,000**
Meningococcal diseases	**30,000-50,000**

In an attempt to accelerate the improvement and increase the sustainability of immunization coverage in the region, in 2000, the WHO/AFRO Vaccine-Preventable Disease (VPD) Unit, in collaboration with key partners, developed a regional strategic plan. The plan, which covers the period from 2001-2005, was intended to guide WHO/AFRO investments and was expected to lead to improved immunization coverage across the countries. However, a mid-term review conducted in 2003 showed that by the end of 2002 only:

- 24% of countries in the WHO Africa region had achieved >80% DPT3 coverage nationally
- 2% of countries had achieved >80% DPT3 coverage in all districts
- 26% of countries had achieved >80% DPT3 in 50% of districts

These findings made it clear that the objectives of the strategic plan would not be achieved with existing strategies; hence countries were encouraged and supported to adopt the RED strategy.

The RED strategy has five operational components:

- Planning and management of resources - better management of human and financial resources
- Supportive supervision – on site training by supervisors
- Re-establishment of outreach services - regular outreach for communities with poor access
- Community links with service delivery - regular meetings between community and health staff, as well as other community actions
- Monitoring and use of data for action – charting of vaccine doses, mapping of populations in each health facility, analyzing and using data for decision-making

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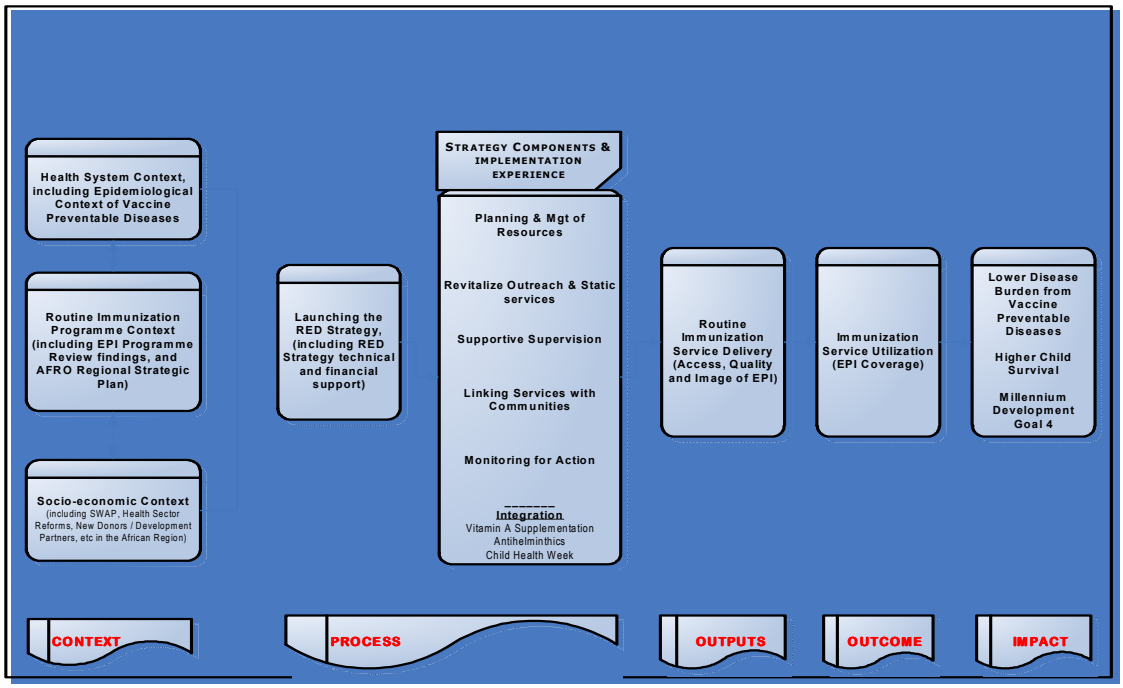
1.3 Evaluation Framework

The conceptual framework for the RED evaluation is presented in Figure 1. This framework shows the relationship between the *context* in which RED is implemented, the *inputs* and *processes* of implementation, and the *output* (immediate), *outcome* (intermediate) and *impact* (long-term) level results of the strategy.

Figure 1. Evaluation Framework



Context. The evaluation focused on important health systems issues in each country, such as the burden of vaccine-preventable disease, the degree of health sector decentralization, the organization of the national immunization program, and its place in the public health system. The evaluation also addressed important socio-economic factors, such as poverty and infrastructure, which affect immunization program performance in many African countries.

Inputs/Process. The launching of the RED strategy and experiences with its implementation were considered as input and process factors.

Outputs. A population's access to immunization services, the quality of those services, and the image that immunization services have in the 'eyes' of the community and other stakeholders were considered to be the strategy's outputs.

Outcomes. The utilization of immunization services (i.e., coverage) was the primary outcome variable.

Impact. The burden of vaccine-preventable disease and child survival, as well as the achievement of the MDGs (especially MDG 4), were considered impact-level results. Impact was not addressed in this evaluation because of the relatively short period since the introduction of the RED strategy.

The following sections of the report present the findings of the evaluation, applying this conceptual framework.

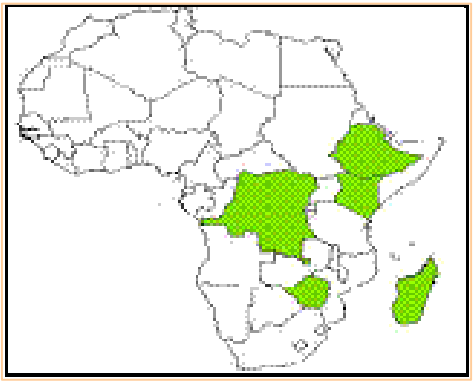
1.4 Evaluation Design and Method

This evaluation was designed as a rapid assessment of the current status of RED strategy implementation in selected countries in the Africa region. The primary selection criteria for the countries included in the evaluation were:

- Countries that had been implementing the RED strategy for at least one year at the time of the evaluation
- Balanced regional and language distribution

Based on the above criteria, Angola, the Democratic Republic of Congo, Ethiopia, Kenya, Madagascar, Malawi, Togo and Zimbabwe were initially invited to participate in the evaluation. Angola and Togo were not able to participate for various reasons, so the number of countries visited was five.

Figure 2: Map of Africa showing the countries selected for RED strategy evaluation



The evaluation team for each country was composed of representatives of key immunization partners (CDC, WHO/HQ & AFRO, UNICEF and USAID). The field work was conducted from 5-25 *June, 2005*.

The tools developed and used for the quantitative and qualitative components of the evaluation were:

- **Form 1** – Quantitative data analysis. Groups districts according to the category of DTP3 coverage (<50%, 50-79%, >80) in which they fall; captures DTP1, DTP3 and Measles coverage, and Drop-Out Rates; permits analysis of progress from 2002 – 2004.
- **Form 2** – Analysis of Doses Administered: Summarizes DTP1, DTP3 and Measles data for 2002-2004.
- **Form 3** – Qualitative Questionnaires: A minimum of seven completed per country: 1 at national level, at least 2 at district level and at least 4 at health facility level
- **Form 4** – Qualitative Data Summary Sheet: Used to compile information from Form 3 and to assess additional human resources provided for RED at national, district and health facility levels
- **Form 5** – RED Evaluation Country Report - Structured to provide a useful country situation report, especially on the successes and areas for improvement in the future.

All tools used for the evaluation are found in Appendix I.

During the country visits, quantitative data was collected using Forms 1 and 2 and analyzed to determine changes in immunization coverage by district and category of coverage, and to identify the relative changes between RED and non-RED districts. Interviews were conducted using standardized questionnaires at national, district and at health facility levels. Qualitative information was analyzed and the key points consolidated to form part of a national report. Each evaluation team debriefed district and national authorities before departure.

Part II
Implementation Experiences and Results

The steps taken by countries in the Africa region to roll out the RED strategy, key activities and outputs of the implementation process, and the outcomes in terms of immunization coverage are discussed in this part of the report. A summary of the RED implementation profile of each selected country is also presented.

2.1 RED Strategy Rollout

The rollout of the RED strategy in the five countries was generally conducted in a systematic manner, with the process consisting of the following steps:

Prioritization of districts. At national level, district data were analyzed and districts were categorized according to the criteria shown in the chronogram on page 9 of "Increasing Immunization Coverage at Health Facility Level" (WHO/V & B/02.27). These criteria focus on access to and utilization of immunization services, and numbers of un-immunized children. Other factors, such as geographic accessibility and the potential for achieving change were also considered in the selection of the first-round districts in each country, together with the presence of partners who might help to ensure the success of the RED strategy introduction.

Training of responsible officers. Following the selection of districts, the RED strategy was normally introduced via a workshop at national level that brought district staff together with their regional or zonal supervisors. Workshop content focused on the use of micro planning to improve routine immunization coverage, as well as the other components of the RED strategy. In some countries, the AFRO Mid-level Manager's (MLM) training modules were used. This orientation/training was then cascaded to the lower levels, but in different ways in each country, and with content added in some cases, as country teams deemed it necessary.

Development of norms, standards and tools. Most countries developed or adapted norms, standards and tools for RED implementation. These were then distributed to districts for their adaptation, and use.

Drafting of microplans for routine immunization. While some countries deployed national staff to work with the priority districts on their microplans, others assigned the responsibility to district health staff that had been trained at national level in microplanning. The first approach was felt to be the most effective, but it was also contingent upon the availability of resources.

Provision of funds for activities. The final step at national level was the provision of funding for district activities. Funding decisions are normally based on a review of the activities included in district microplans and on the availability of funding. Amounts provided to districts have varied from country to country. In fact, once workshops and cascade training have taken place, and basic tools are in place, districts are expected to allocate their own resources for RED strategy implementation. Nonetheless, from $2,000 to $10,000 per district per year has been provided in several of the countries visited during the evaluation.

2.2 Planning and Management of Resources

Planning and management of EPI resources, under the RED strategy, aims to ensure the effective use of human, financial and material resources. It includes the development of national, provincial, district and health facility action plans; capacity building for EPI staff, focusing at district level; systematic vaccine forecasting, supply and distribution; effective management of the cold chain; and the mobilization of financial resources.

Detailed annual plans--either in the form of microplans for routine immunization and/or integrated annual work plans for all health services--were available at district and health facility level in all countries. In several countries, districts involved community authorities in the planning of activities to ensure that they were informed and ready to help in selecting locations and scheduling outreach sessions. Vaccination calendars for both static and outreach sessions were usually displayed in health facilities. And in most of the countries and districts visited, the vaccination sessions planned - both static and outreach – were routinely conducted.

Figure 3: A RED Strategy Planning Meeting in session

In relation to vaccine and immunization material management, only sporadic shortages of vaccines--BCG, Measles, OPV--and of BCG syringes were noted, There were no major stock outs of vaccines or injection materials reported - a good indicator of adequate planning and delivery of vaccines and management of other EPI logistics.

Challenges and areas for improvement

- *Annual plans* are not generally used as management tools. Likewise, health facility staffs are not always involved in annual planning. Instead, they are handed a plan to implement that they have not been involved in developing. The information in an annual work plan was important for the implementation of activities, and programs can benefit greatly from involving health facility staff in their development. Also beneficial are regular reviews of progress against annual work plans because they allow staff and managers to identify bottlenecks and map out corrective actions.

- *Vaccine needs* are not estimated at health facility level. The numbers of children expected for immunization sessions (static or outreach) are not routinely calculated. Thus, health facilities and districts are at risk of either having to cancel sessions due to a lack of materials, or of having a surplus of vaccine stocks at a level where cold chain coverage can be intermittent.

- *Financial resources* are sometimes inadequate to fund annual workplans. In one country only 40% of the annual budget was actually funded; in several other countries, resources arrived late, delaying implementation. Bottlenecks in financial flows to districts are common, and caused by a number of factors, including the failure to reconcile past transfers, miscommunications between district and higher levels, bad relationships between health and

administrative officers, and/or incomplete financial reforms. In several countries resources have been made available to districts for the introduction only of the RED strategy. Continuing to fund the strategy in these settings was understood to be the responsibility of the districts themselves. In order to reach more children, intensified activities will be needed for more than the first year of implementation, and there will be an additional cost involved, albeit a small one. This must be anticipated and districts must be encouraged to cover it if RED is to continue in these countries.

- *High staff turnover and staff shortages* negatively affect immunization service delivery. Although training was conducted when the RED strategy was introduced, the impact of that initial training has been diluted in some districts because staff have transferred out and been replaced by individuals who have never heard of RED. Not all districts have planned or had the funding available to train new staff or to conduct refresher training and review meetings to keep even trained staff motivated. Another problem in some areas was the lack of health workers in rural health facilities. With only one health worker posted to a health post, for example, it was difficult to conduct outreach without closing the health facility for extended periods.

- *Vaccine wastage rates* are not routinely calculated and the quality of stock records varies at health facility level. Although few stock outs were reported, high wastage rates were noted in several countries. Reducing vaccine wastage increasingly important as countries introduce new, more expensive vaccines. Monitoring wastage at the lower levels of the health system can help improve this situation. For example, one country reduced BCG wastage from 70% to 20% by identifying the problem caused by 20-dose vial size and solving it by grouping mothers together for appointments.

- *Cold chain equipment availability* varies dramatically from country to country and within countries. Additionally, the shortage of electricity and other power sources in the rural areas in some countries limits the cold chain and hampers the delivery of routine immunization services.

2.3 Supportive Supervision

Supportive supervision, as a key component of the RED strategy, aims to assist health workers in providing quality immunization services. This activity helps to identify specific needs in capacity building (training, supply of equipment, expertise, technical information etc.), to provide on-site training, and to help staff identify and solve problems related to their working conditions. Supportive supervisors offer individualized attention to their staff members, help them interpret technical guidelines, provide them with updates on recent developments and research, and share information with them about best practices. The key elements of supportive supervision include:

Figure 4. On-the-job Training in Action: Supportive Supervision

- Integrated supervision approach
- Multi-disciplinary supervision teams
- Integrated supervision checklist
- Supportive supervision action plan
- Supportive supervision visits
- Following up supervision

The evaluation team noted that supervision visits were planned at the district level in most countries and often incorporated into annual work plans. In some countries, partners were actively involved in conducting EPI supervision visits; in others, supervision of routine EPI was integrated with AFP and measles surveillance. Most countries had standard checklists for supervision, either specific to EPI or integrated with other services. Some supervisors wrote their observations and recommendations in supervisory books that remained in health facilities for follow-up. However, several challenges remain.

Challenges and areas for improvement

- *Supervision and follow-up* are not always structured. Some supervision checklists did not address all RED components in several countries; some checklists were not consistently used - issues such as stock levels, waste management, cold chain, and plotting of immunization coverage may not be routinely monitored.

- *Insufficient logistics* (e.g., transport and fuel), competing program priorities, and lack of staff all affect the frequency and quality of supervision, especially in remote areas. Some national, provincial and district supervisors report conducting only 50% or less of planned visits. Sharing transportation among programs (e.g., using polio eradication vehicles, or accompanying mobile teams) may only allow time for "spot checks" rather than thorough supportive supervision.

- *Supervision was not always supportive*. Many supervisors do not provide regular on-the-job training or constructive feedback. This may reflect inadequate training of supervisors in some countries.

The district medical officer has access to a motorbike and conducts very regular supervisory visits based on problems identified at monthly meetings with health facility staff.
One HF we visited said he visited every 3 days checked her register and encouraged her not to cancel sessions

Best Practice - Ethiopia

2.4 Re-establishing Outreach services

A major objective of the RED strategy is to revitalize outreach services in order to reach hard-to-reach population groups. The steps for re-vitalizing outreach are (1) situation analysis, (2) identifying and prioritizing hard-to-reach communities; (3) preparing outreach plans; and (4) implementing and monitoring planned outreach sessions.

Figure 5: A Child being vaccinated during a RED strategy outreach session

All the countries visited have re-established outreach services as a strategy for reaching previously un-reached children. Outreach services are reaching over 50% of the target population in some countries, and have contributed significantly to the improvement seen in immunization coverage. Most outreach sessions are now being planned and implemented from health facility level. In the past, implementation from the district level resulted in erratic implementation.

Outreach services in several countries are being used to provide other interventions, including Vitamin A supplementation, anti-helminthics, health education, and others). Generally the children who are un-reached with immunization services are also un-reached with other interventions. In most countries, immunizations are often the only contacts mothers and children have with health care delivery system.

Immunization outreach services were generally used to provide other interventions (Vit A supplementation, anti-helominthics, ITNs, health education, etc.

Best Practice - Zimbabwe

Challenges and areas for improvement

- *Coverage data was not always disaggregated by service delivery approach* (static, outreach, mobile). Such disaggregated data would be helpful in determining the cost-effectiveness of each approach and in helping to plan the resources needed for the various sessions.

- A balance between sustainable outreach services and reaching the maximum number of children has not yet been established. In some settings, two-thirds or more of all immunizations are thought to be given through outreach. Sessions are not always planned based on true inaccessibility to immunization services and the numbers of children coming to some outreach session are so low that those sessions cannot be justified. Health workers complain in some settings that, after many years of door-to-door polio NIDs and SIAS, communities will no longer come out to outreach sites, but wait instead for health workers to come to their homes.

- Some countries are missing the opportunity to include additional interventions with immunization services. In some cases this was due to irregular supplies of products, such as ITNs. In others, uncertainty about the policy for offering additional services was the cause.

- Some outreach sessions are cancelled due to lack of transport and fuel. While outreach sites have been established based on the need to reach the hard-to-reach, resources are not always made available to conduct outreach.

2.5 Linking Services with Communities

Linking services with communities is a key step in improving and sustaining high immunization coverage. The RED strategy aims to involve the community in all aspects of immunization services (planning, implementation, monitoring, etc.). This will foster community ownership of the program, contribute to its viability and generate a spontaneous demand for immunization services when they are not available.

The major elements of the process of taking EPI services with communities include:

- Community diagnosis/social mapping
- Development of an activity plan (key activities) for community linkages
- Sensitization meetings with communities
- Supervising community linkages activities
- Monitoring the results of community activities
- Evaluating the impact of links between communities and immunization services

Involvement of community leaders and the structures that are known and respect facilitated increased acceptance of all health services, including immunization. The evaluation team noted that within districts where the community and health workers planned activities together and met regularly to review progress, community ownership and commitment ensured optimal delivery of service. .

Figure 6. Community Meeting in Session – Linking Health Services with Communities

Training of community health workers (or health promoters) has been a focus of this component, promoting their involvement in demand creation, defaulter tracing and mobilizing community resources. Their knowledge of immunization has been updated and they have more actively used data and community networks to increase acceptance and use of services.

Challenges and areas for improvement

- *High turnover of community health workers* due to lack of incentives because of limited resources at health facility level. Community health promoters generally expected some kind of compensation for their work. The absence of incentives or sustained support for their involvement has often resulted in high turnover or participation limited to only short-term activities (e.g. campaigns).

- *Existing and well-established community structures or community-based organizations are underutilized* for advocating for services, providing information to the public, or participating in outreach activities. These structures and organizations are engaged primarily only during campaigns and SIAs and are not brought into the routine system for longer-term involvement and support.

In both Zimbabwe and Madagascar, defaulter tracing systems are well developed and incorporate community health workers

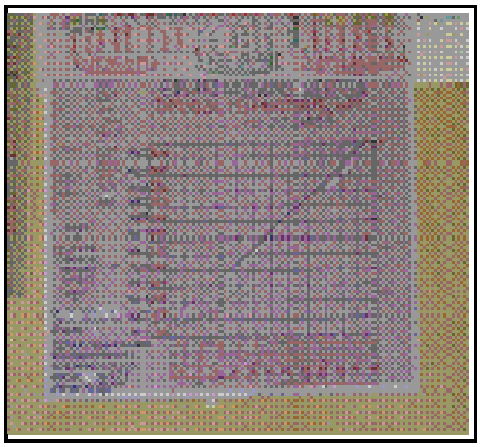
Best Practice – Zimbabwe and Madaaascar

2.6 Monitoring for Action

Monitoring, in the context of the RED strategy, is the process of comparing progress with established targets. It involves several steps: (1) planning the program; (2) setting performance targets; (3) conducting program activities; (4) recording achievements; and, (5) comparing results with targets to determine performance. Monitoring requires continuous observation and collection of data about the immunization program to ensure that it is progressing as planned.

The evaluation team noted that the basic concepts of target and hard-to-reach populations were known to districts and health facilities, and that these concepts were being used in planning and targeting activities. Health facility staff and district managers consistently display wall monitoring charts and most charts are up-to-date and properly completed. Staff appeared to be using the charts to monitor and assess their own performance and charts were triggering special action to reach the unreached through intensive outreach.

Figure 7. A Monthly Monitoring Chart in a Health Facility



The number and regularity of district review meetings varied by country and district. Maps of catchment areas (with static and outreach sites spotted) were often present in health facilities and district offices. Most staff interviewed could describe their local defaulter tracking system; many were using the system to effectively identify defaulters for follow up.

Immunization data is charted on the monitoring chart and updated monthly. National EPI program analyses coverage data monthly and shared with division directors and ICC.

Best Practice – DRC and Ethiopia

Challenges and areas for improvement

- The frequency of review meetings were increasing but in many districts they are not held quarterly, as recommended. Where review meetings are being held, staff felt that they were playing a critical role in the increases seen in immunization coverage. Increasing the regularity of the meetings was perceived as important.

- Major deficiencies in national population information were noted. Figures do not always agree with local population estimates, leading to erroneous conclusions regarding coverage. This leads to problems targeting interventions appropriately and an uneasiness among health workers who are either unable to reach their targets or who find themselves vaccinating over 100% of the target population, thus damaging the credibility of their achievement. These discrepancies also make it hard to forecast vaccine demand accurately, and contribute to over and under supply at all levels.

- Some health staffs continued to have difficulty in completing the wall monitoring charts and interpreting the graphs that they develop. There are also problems with implementation of defaulter tracing systems. In both cases, the problem was attributed to a lack of training, either in formal sessions or on-the-job, through supportive supervision.

Immunization Coverage in five countries evaluated

The evaluation revealed remarkable increases in immunization coverage in four of the five countries. In Madagascar, where coverage declined between 2003 and 2004, the decline was far less in the "RED Districts" than in the "non-RED districts" and factors resulting into the decline were totally out the influence of the immunization program. The total number of districts with DPT3 coverage <50% in the five countries evaluated reduced from 377 to 222 in 2004, while the districts with DPT3 coverage > 80% increased remarkabLY from 70 to 197. The number of extra children vaccinated annually also increased from 159,591 in 2002 to 647,454 in 2004. The number of unvaccinated children reduced remarkable from 3 million to 1.8 million, as shown in the summary of data from the five countries evaluated – in Figures 8 and 9 below.

Figure 8:

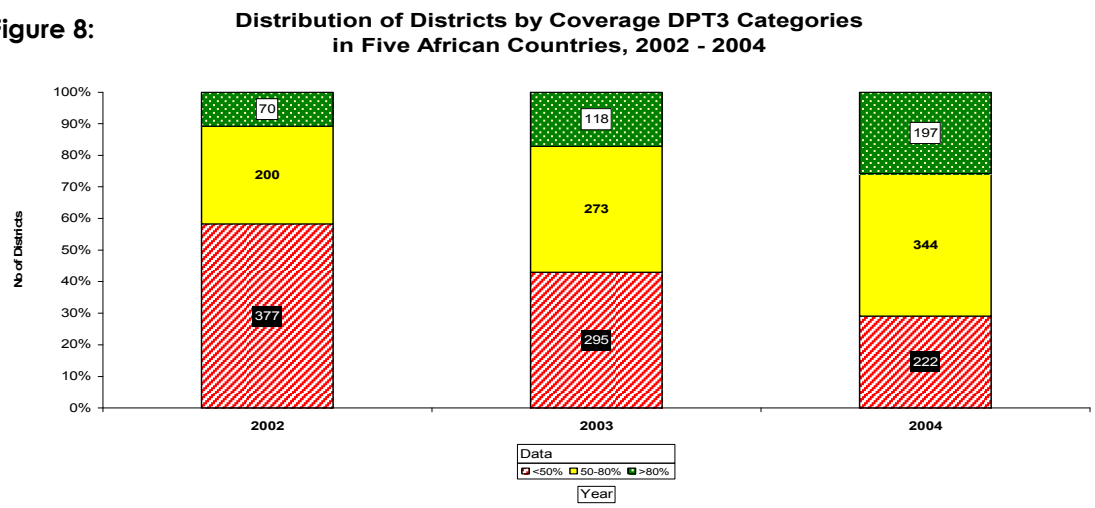
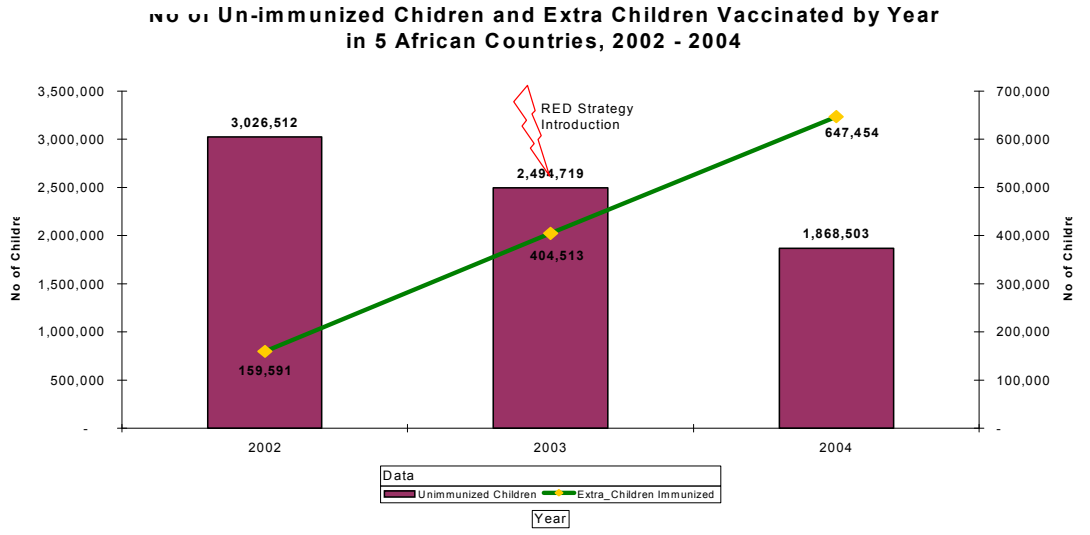


Figure 9

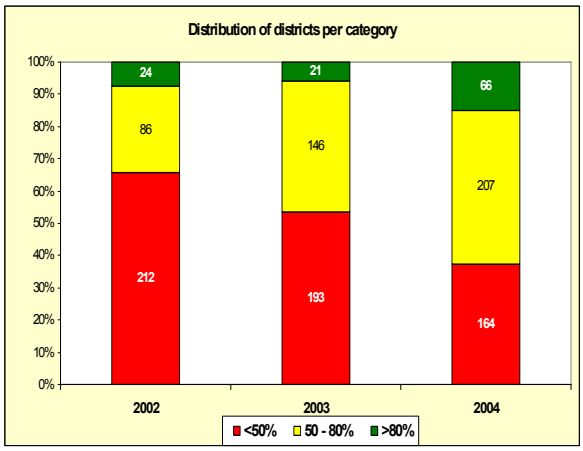


2.7 RED Strategy Implementation: Country Profiles

2.7.1: Democratic Republic of Congo (DRC)

The population of DRC for 2004 is estimated at 6 5,805,805, with approximately 2,632,232 children under the age of one. The country is divided into 11 provinces and 515 zones (equivalent of districts in other countries). DRC began the implementation of the RED strategy in 161 of 515 districts in 2003. Following the implementation of the RED strategy, coverage continued to increase dramatically in those zones. The number zones reporting DTP3 coverage of at least 80%, from **24 in 2002 to 66 districts in 2004**; the number of un-immunized children also reduced dramatically from 1,**385,852 in 2002 to 894,357 in 2004.**

Figure 10. DR Congo -Distribution of Districts by DPT3 Coverage

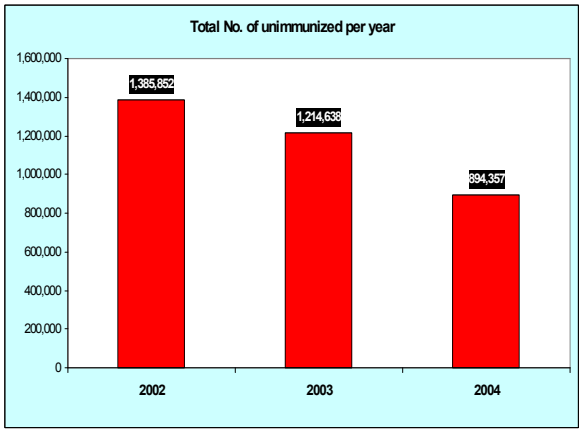


A. Re-establishing outreach services. The national level established norms that were based on flexible microplanning. Although outreach sites should be >5 from a fixed static facility, zones and facilities are allowed to make adjustments in their microplans depending on local circumstances.

B. Supportive supervision. DRC developed supervisory tools for all levels and established norms for supportive supervision (e.g. national to regional, zone to health facility – monthly). Partners have participated in supervision either as part of joint team or separately. National level supervisors were trained and supervision was included in the annual plan. Feedback has been provided in various forms. Funds, motorcycles and, in some cases, vehicles, for supervision were provided through on-the-ground partners and the use of GAVI ISS support.

C. Monitoring for Action.
Data are received from the field either as paper copies or transmitted by radio. Some Provincial and Antenna offices have computers and enter information at that level. Data and information have been shared with the EPI Divisions and the ICC Technical Committee each month.

Figure 11. DR Congo - Trend of National Immunization Coverage



D. Linking Services with communities. Community health workers (CHWs) have traditionally been used in the DRC system to link health services with the community. The EPI has been providing refresher training and registers for CHWs to keep track of drop outs and as a communication tools.

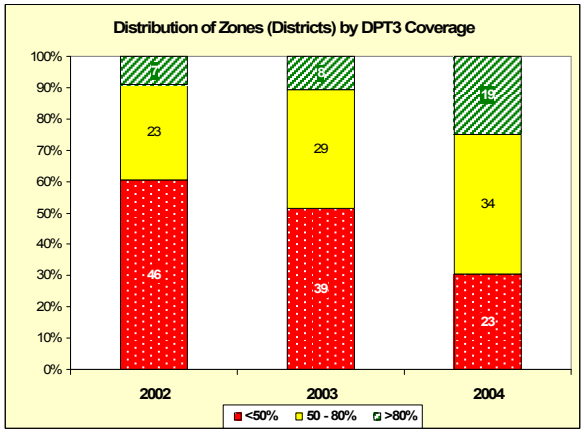
E. Planning and management of resources.
Multi-year and annual workplans as well as ICC partner Memoranda of Understanding was developed in 1998. RED was integrated in 2003 and implementation began with training for all staff. Tools were provided to all zones and each zone then developed microplans which were generally funded at a level of about 40%, with priority given to the RED zones. Although not as intensively supported, non-RED zones also received the training, tools and some funding.

2.7.2: ETHIOPIA

In 2004, the population of Ethiopia was 71 million, with approximately 2,627,000 children under the age of one. Ethiopia has a federal structure and is divided into 11 semi-autonomous regions, 85 zones and over 600 districts (woredas). Ethiopia's routine immunization coverage has been among the lowest in the WHO/AFRO region. In 2002, DPT3 coverage was only 52% nationwide. The RED approach was introduced in 2003 in 13 zones with poor access and utilisation. The selection criteria and first months of implementation were reviewed in September 2004, and an additional 45 zones were selected for expansion of the RED strategy. By June 2005, at the time of this evaluation, a total of 58 of Ethiopia's 85 zones were implementing the RED strategy.

After only one year of implementation in the first 14 RED zones, DPT3 coverage rose from 28% (2002) to 60% (2004); the number of districts reporting DTP3 coverage of at least 80% increased from 9 to 26; and, the number of un-immunized children declined approximately from **963,950 to 625,334.**

Figure 12. Ethiopia – Distribution of Districts by DPT3 Coverage Rate, 2002 - 2004



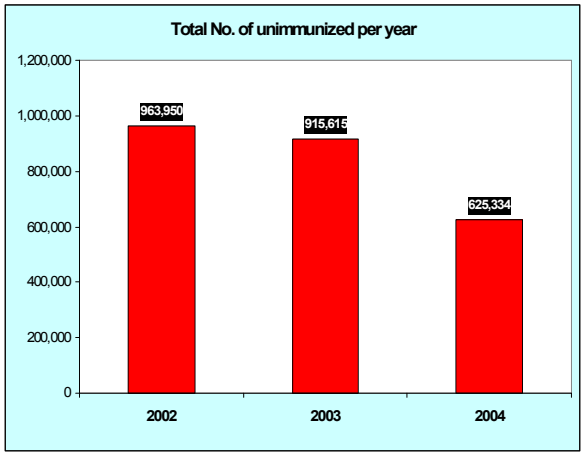
Activities implemented at district level using the RED approach are summarised below:

A. *Re-establishing outreach.* Outreach sessions were planned and most were implemented. Other health interventions were integrated with outreach in some locations. Outreach was often conducted door-to-door to increase coverage. Approximately two/thirds of all immunizations are thought to be given during outreach sessions.

B. *Supportive supervision*. Supervision plans were included in district plans. Districts conducted regular supervision visits, used supervisory checklists of different types, and some supervisors recorded observations in health facility registers. Partners played an important role in supportive supervision.

C. *Monitoring for action*. New, more complete monitoring charts were posted and used in health facilities in all RED districts. Data are generally timely and complete. A defaulter tracing mechanism was put in place using vaccination registers. Data have been used in annual planning in many districts, but not yet for estimating vaccine needs or planning outreach.

Figure 13. Ethiopia: Trend of Un-immunized Children, 2002 - 2004



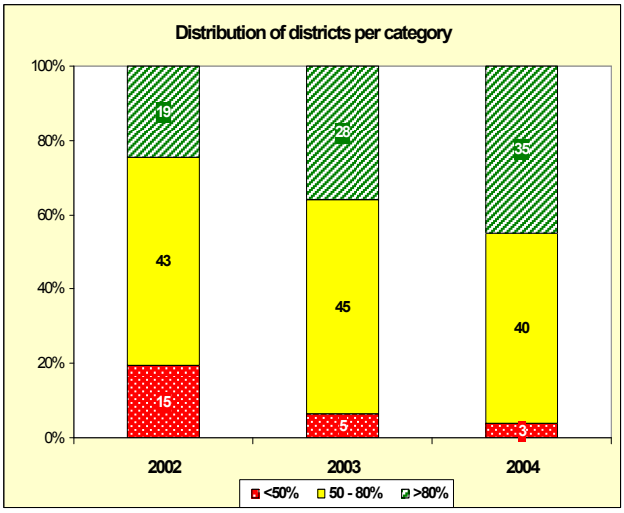
D. *Linking with community*. District managers included zonal councils in their annual planning meetings, shared schedules for outreach with village leaders, and assigned health workers to specific villages for immunisation outreach. Efforts to work with community leaders to promote immunization, support outreach and assist in defaulter tracing had mixed results. A new cadre of Health Extension Worker will work with communities and community health promoters and agents in the future.

E. *Planning and management of resources.* Zonal and district staff were trained in micro-planning and other topics using the MLM training modules. Micro plans were prepared by all districts and administrative authorities were involved in this process. Vaccine stocks are monitored regularly.

2.7.3: KENYA

Kenya has a population of 32,000000 (2004), with estimated 1,280,000 children under the age of one. The country is divided into 8 provinces and 78 districts. The Kenyan EPI program offers the pentavalent vaccine in addition to the six traditional antigens. The pentavalent vaccine was introduced with GAVI support in 2001. Immunisation coverage in Kenya has been quite good. The number of district achieving ≥80% increased from **19 in 2002 to 35 in 2004**. The number of un-immunized children decreased **from 249,674 to 197,296**

Figure 14. Kenya – Distribution of Districts by DPT3



Kenya introduced the RED approach in all 78 districts in 2003. The country utilised GAVI ISS funds in addition to the support provided by WHO, UNICEF and CDC. The country has implemented a number of activities at national level to further strengthen the RED approach.

A. Re-establishing outreach services. Outreach services have been strengthened with the RED approach and all districts have integrated other health interventions and some of these interventions have served as incentives for defaulters to come back for immunization services e.g. distribution of ITNs.

B. Supportive supervision. All districts conduct supervision using a standard checklist and record observations in supervisory books at health facilities to facilitate follow up action.

C. Monitoring for Action. Immunisation monitoring charts were displayed and plotted correctly. The districts have identified hard-to-reach populations and plotted them on maps. Districts hold quarterly review meetings with health facility staff.

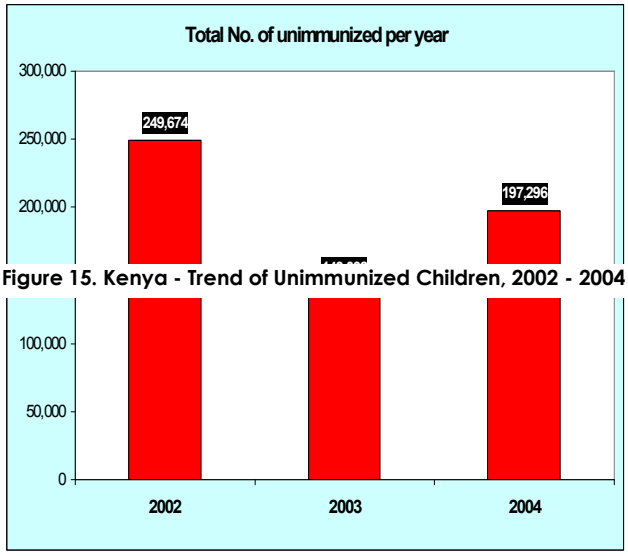


Figure 15. Kenya - Trend of Unimmunized Children, 2002 - 2004

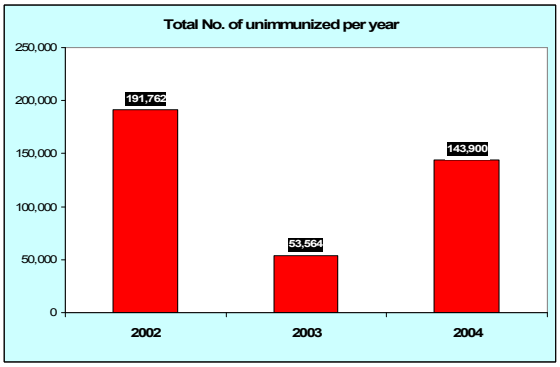
D. Linking Services with Communities. Districts hold meetings with stakeholders and some have established partnerships with religious organisations and charitable organisations. Other districts have trained community health workers and community focal points.

E. Planning and management of resource. Annual plans existed before RED but micro planning has been strengthened. Availability of vaccines and logistics has improved in line with improved planning and management.

2.7.4: MADAGASCAR

Madagascar's population is estimated at17, 659, 364 in 2005, with 706,375 children under the age of one. The country is divided into 6 provinces and 111 districts. Due to several months of political instability after the Presidential elections, immunization coverage rates declined in 2003-2004 nationally, following a dramatic increase in 2002-2003. The RED approach was introduced in Madagascar in 2004 with support from WHO and UNICEF, starting with 21 priority districts. The following activities constituted the RED strategy: Despite the decline in immunization performance between 2003 and 2004, coverage rates in the RED districts remained higher. Using 2002 as the baseline, the number of districts reporting>80% increased from **17 in 2002 to 45 in 2004**. During the same period, the number of un-immunized children fell from **191,762 in 2002 to 143,900 in 2004**.

Figure 16 Madagascar - Trend of National Immunization Coverage

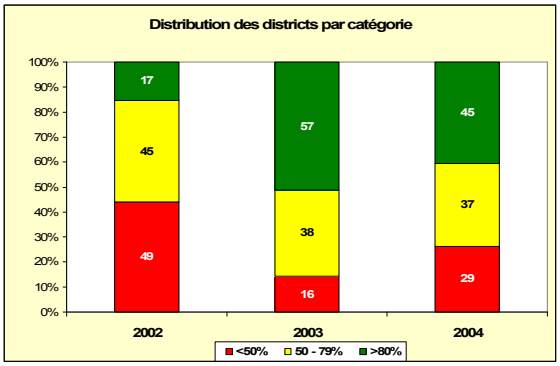


A. Re-establishing outreach services.
Outreach activities are generally planned and implemented at the health facility level. Other interventions are also integrated and monitored as part of outreach sessions (Vitamin A, ITN, de-worming, ITP, etc). Some outreach sessions were funded with personal funds of the health workers when operating budgets were not yet released

B. Supportive supervision. Supervision plans were included in the POAs or microplans. The majority of supervisory visits planned are carried out and feedback has been provided in various ways. For example, through supervisory notebooks kept at the facility and/or during quarterly district meetings of health staff. Emphasis was being placed on formative and supportive supervision.

C. Monitoring for Action. The target population was generally known and situated on maps available at the districts and health facilities. Hard to reach populations were generally identified. Completeness and timeliness of reports was good, with tally sheets and monthly activity reports in use.

Figure 17. Madagascar -Distribution of Districts by DPT3 Coverage



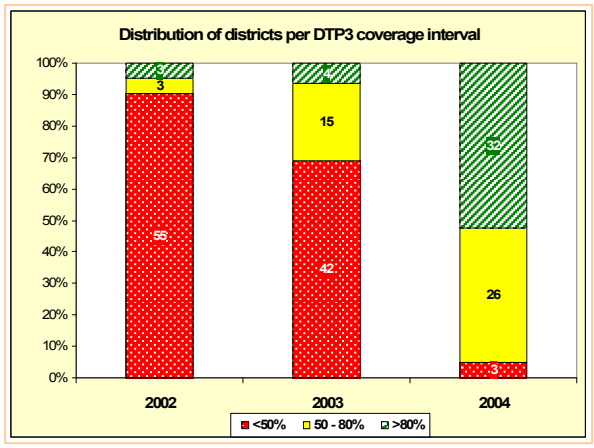
D. Linking Services with communities. The link between the health system and the community has been through local health committees and community agents. Regular meetings were held with local health committees in most districts and the community agents were actively involved in defaulter tracing. There has been strong inter-sectoral collaboration with local authorities, dignitaries and industries. Community mobilization has also been strong, through the use of local leaders to promote services and with health celebrations (WHD and other festivals).

E. Planning and management of resources. Health workers were trained in the RED strategy. Microplans were developed and available (sometimes integrated into the annual PoA) at district level and in many health facilities.
Vaccination session calendars for both routine and outreach were displayed in many of the health facilities and most vaccination sessions planned were carried out. Generally vaccines were availability at all levels.

2.7.5: ZIMBABWE

Zimbabwe's population stood at 11,892,000 in 2004, with 385,495 children under the age of one. The country is divided into 9 provinces and 61 districts with 62 reporting units. The Zimbabwe EPI program offers the six traditional antigens. In addition to these, the program introduced Hepatitis B vaccine in June 2003. Following the implementation of the RED approach, the coverage rates in 2002-2004 indicated a dramatic increase in the number of districts reporting DTP3 coverage of at least 80%, from **3 in 2002 to 32 districts in 2004**. During the same period, the number of un-immunized children declined from **235,273 in 2002 to 7,616**

Figure 18: Zimbabwe -Distribution of Districts by DPT3 Coverage



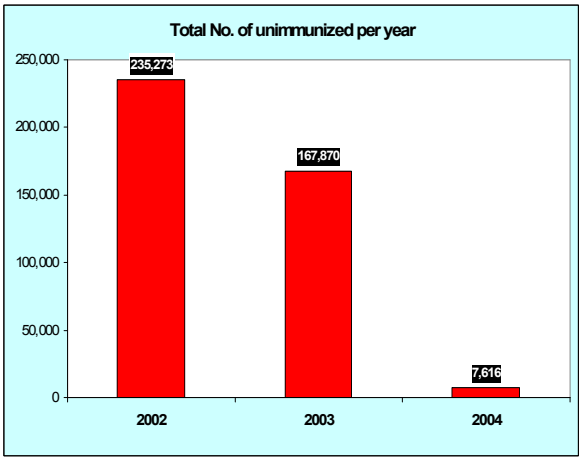
The RED approach was introduced in Zimbabwe in 2004 with support from WHO and UNICEF, starting with ten pilot districts in all provinces. The level of Implementation of the RED strategy has varied among the districts. However, the following activities were common in most of the districts visited:

A. Re-establishing outreach services. All RED districts opened or re-established outreach sites since 2004. In addition to planning and conducting regular outreach, these districts integrated other interventions, such as health education and treatment of minor illnesses.

B. Supportive supervision. All districts planned and implemented supportive supervision; the frequency varied. Supervisory reports were found at some health facilities.

C. Monitoring for Action. District staff knew their catchment areas and have identified and mapped hard to reach population groups. Immunisation monitoring charts were displayed and plotted correctly. Most districts hold regular review meetings with health facility staff. In addition, the defaulter tracking mechanism was well implemented.

Figure 19. Distribution of Districts by DPT3 Coverage



D. Linking Services with communities. Districts collaborate with communities through community health workers and health committees at rural health facilities. Regular meetings were held with community leaders, local politicians and NGOs. Some districts have also established links with the private sector.

E. Planning and management of resources. Microplans have been prepared and integrated within district health plans. There were no reports of stock outs of vaccines and logistics. Most districts conducted EPI training in 2004 and some provided on-the-job training for newly qualified health staff.

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Part 3 – Conclusions and Recommendations

3.1 Looking Back: Conclusions and Lessons Learned

Looking back, the RED strategy implementation experiences in the countries selected for this evaluation provided lots of lessons. The major lessons and enabling factors are outlined below.

- The RED strategy was implemented by all countries evaluated and was initiated through: use of data to prioritize districts for assistance, national level training, micro-planning and provision of funds to districts for the implementation of the micro-plans. All components of the RED strategy are being implemented in all countries. The implementation of each component was adapted to local situations by each country. The five components of the strategy - Planning and management of resources, re-establishment of outreach service, supportive supervision, monitoring and use of data for action and linking the health services with the community.

- Vaccination coverage increased in four of the five countries reviewed. In Madagascar, where coverage declined between 2003 and 2004, the factors causing the decline were outside the influence of EPI. For the most part, districts that benefited directly from the RED strategy demonstrated greater increases in coverage than other districts in the country. Even in Madagascar, the decline in vaccination coverage in RED districts was far less than that experienced in non-RED districts.

- Generally, other interventions (Vitamin A, ITN, anti-helmintics, ITP, etc) are provided during outreach sessions.

- Successful introduction of RED was contingent on funds being made available for training, micro-planning workshops and the intensification of outreach and supervisory activities. In general, RED was not implemented in isolation.

- There are number of opportunities for the future of RED, among which are the current high level of interest of partners and countries in immunization (governments, GAVI Phase II, IFFIm, GIVS, MDGs) and the early successes in the implementation of the strategy, proving the viability of the strategy as a framework for channelling resources and focusing district activities.

- Threats that may hamper the future of the strategy include, the high turn over of staff coupled with lack of on-going systems for upgrading skills and training newly deployed staff, the unreliable denominator data in most countries, competing public health priorities and the lack of sustained availability of resources to implement activities (outreach, supervision, cold chain, transport).

RED Strategy Best Practices

A summary of best practices noted by the evaluation teams are listed below.

- In DR Congo, the national EPI program **analyzed coverage data monthly and shared** the results with division directors and the technical Interagency Coordinating Committee where corrective measures were proposed for low performing areas. Partners felt that this regular review of information at the national, intermediate and district levels had played a key role in the recent improvements seen in coverage.

- In both Zimbabwe and Madagascar, **defaulter tracing system**s are well developed and incorporate community health workers. In Madagascar, where they had developed a system based upon tickler files, the shortage of supplies made the tickler file unusable. However, the importance of identifying and tracing defaulter had been so well received that local solutions to the supply shortage had been developed.

- In one district in Ethiopia, where DPT3 coverage was 83%, **annual planning** was done in close collaboration with the communities and covers activities down to sub-Kebele (sub-village) level to optimize implementation of activities.

- In one health facility in Ethiopia, the head of the health facility noted a high drop out rate between DPT1 and DPT3. She ***discussed with the community*** and was able to pin it down to mothers' concerns over post-vaccination fever. By working with them to explain that this is the body's natural reaction and proves the vaccine is working, she was able to reduce her drop out rate substantially.
- In Madagascar, **maps of catchment areas** were widespread. One district visited had maps of all its health facilities and their catchment areas displayed. When asked, HWs could describe the populations marked and the particular challenges in reaching them - an excellent example of staff at the lowest administrative levels knowing their populations and the strategies to use to reach their children.

- In Kenya, **communities are engaged in resource mobilization for immunization** and other priority public health programs through the community development fund.

3.3 Looking Forward: Key Recommendations

The key recommendations per level of responsibility (national authorities and WHO partners) to facility and implementation of recommendations and scaling up of the RED strategy in the Africa region.

National governments

- countries should scale up the implementation of the RED strategy to all district
- Countries should make resources to for the strengthening of routine immunization thought the implementation of the RED
- Fully involve health facility workers in the development of district micro-plans to encourage ownership
- Data collected by health facilities should be disaggregated by the type of delivery strategy (outreach or static)
- All country should use the opportunity provided by the RED strategy to address the problems of inadequate number of health workers at a facility and their rapid turnover to ensure consistent delivery of services and maximize impact of training.

WHO and partners

- Encourage all countries to the RED as the strategy to accelerate and sustain immunization coverage
- Use the opportunity offered by the RED to channel resources and focus immunization activities at the district level
- Ensure availability of resources at district level for the implementation of the RED strategy
- Provide health workers with the skills to interpret and use data as a management tool

Appendix

Annex 1a.

EVALUATION OF PROGRESS IN IMPLEMENTATION OF RED APPROACH
QUANTITATIVE DATA
COUNTRY:

1	2	3	4	5		6		7		8	9	10	11		12	13
Categories of Districts	Year	Number of Districts in each Category*	Target Population Under-1 by Category	Immunization Coverage (Doses Given)						Trend compared to previous year					Number of children unvaccinated (Total population - DTP1)	Comments
				DTP1		DTP3		Measles		DTP1	DTP3	Measles	DOR (DTP1-DTP3 /DTP1)	DOR (DTP1-MCV /DTP1)		
				No.	%	No.	%	No.	%	change	change	change				
National (all districts)	2002									Index	Index	Index			0	
	2003									same	same	same			0	
	2004									same	same	same			0	
<50% DTP3 coverage	2002									Index	Index	Index			0	
	2003									same	same	same			0	
	2004									same	same	same			0	
50-79% DTP3 coverage	2002									Index	Index	Index			0	
	2003									same	same	same			0	
	2004									same	same	same			0	
>80% DTP3 coverage	2002									Index	Index	Index			0	
	2003									same	same	same			0	
	2004									same	same	same			0	

* source: JRF

Notes:
The columns in grey do not need to be completed - they will be automatically calculated once the data in the other columns has been input
Column 3: You will need to know the number of districts in each of the 3 coverage categories, i.e. (<50%, 50-79%, >80%) and in each year (2002, 2003, 2004)
Column 4: You will need to know the population of every district in each coverage category and each year to show the under-1 target population
Columns 5, 6 & 7: You will need to know the number of infants immunized (doses given) with each antigen (DTP1, DTP3, Measles) in each district, and each year
Columns 8-10: Starting with 2002 as the index year, 'change' refers to the difference in infants immunized (doses given) between 2002 & 2003, and 2003 & 2004. This calculation is done automatically.

Annex 1b

DTP1 DOSES ADMINISTERED

	2003	2004	Change	% Change
RED Districts			0	
Other Districts			0	

DTP3 DOSES ADMINISTERED

	2003	2004	Change	% Change
RED Districts			0	
Other Districts			0	

MEASLES DOSES ADMINISTERED

	2003	2004	Change	% Change
RED Districts			0	
Other Districts			0	

EVALUATION OF PROGRESS IN IMPLEMENTATION OF RED APPROACH

COUNTRY:

QUALITATIVE DATA

	Year	Key Conclusions on RED Approach Strategies Implemented				
		Planning & Managing Resources	Use of Data for Action	Supportive Supervision	Re-establishing Outreach	Links with the Community
Additional human resources provided for RED implementation	2004					
Additional financial resources provided for RED implementation						
National						
District						
Health Facility						
Additional human resources provided for RED implementation	2003					
Additional financial resources provided for RED implementation						
National						
District						
Health Facility						
Additional human resources provided for RED implementation	2002					
Additional financial resources provided for RED implementation						
National						
District						
Health Facility						

The data input in this sheet is a synthesis of the information gathered using Form 3 at the various administrative levels.

**EVALUATION OF PROGRESS IN IMPLEMENTATION
OF RED APPROACH IN AFRICA REGION
NATIONAL LEVEL QUESTIONNAIRE**

NATIONAL LEVEL: **Country:** _____ **Date:** _____

Date RED Implemented _____

Roll-out Process for Implementing RED Strategy

1. What was the process for roll-out. i.e. training, workshops, support to districts? Include dates and at what levels. _____

   _____

(Look at FSP if available for projected costs for routine for following 2 questions)

2. What additional human resources were made available and at what administrative level?
   _____

3. What additional financial resources were made available, by whom and how were they distributed?
   _____

I. Planning & Managing Resources Component of RED

4. Is there a multi-year plan? ☐Yes ☐No

   If yes, what are the dates _____ to _____

5. Is there an annual workplan for this year? ☐Yes ☐No

6. Have any vaccine and/or immunization supply shortages been experienced during the last 9 months?

   ☐Yes ☐No _____

   If yes, which antigens or equipment, and duration of each stock out. _____

7. Has transport been available for vaccine and material distribution during the past 9 months? ☐Yes ☐No

   If not, what was the cause? _____

   How was it solved? _____

   How long did it last? _____

NATIONAL LEVEL PAGE 2

II. Use of Data for Action Component of RED

8. Is there a monitoring chart displayed in the national EPI office? ☐Yes ☐No

   If yes, is it charted correctly? ☐Yes ☐No

   What was the last month for which data was entered? _____

9. How are data collected, entered and analyzed? _____

10. What is the source of population data? _____

11. Are the hard to reach population groups known? ☐Yes ☐No

    If yes, where are they? _____

    If yes, who are they? Nomadic, IDPs, Riverine? _____

12. What is the timeliness and completeness of reporting from the provinces/districts? (year? monthly trends?)
    _____

13. Is there a regular data monitoring review at national level? ☐Yes ☐No

    If so, how often? _____

    Who attends the meeting? _____

14. What is the proportion of districts below 80% DTP3? _____

    What is the proportion of districts below 80% Measles? _____

    What are the major challenges to achieving these targets? _____

    _____

    _____

III. Supportive Supervision Component of RED

15. Have the national supervisors been trained in the past 12 months? ☐Yes ☐No

16. Is there a supervision plan included in the annual plan? ☐Yes ☐No

17. How frequently are supervisory visits scheduled? _____

18. Is there a checklist for supervisory visits? ☐Yes ☐No If yes, obtain a copy.

19. What proportion of planned supervisory visits have been conducted to date?

    _____

NATIONAL LEVEL PAGE 3

20. What are the major challenges or constraints and opportunities involved in conducting supervisory visits?
_____

21. How is feedback provided to the district? _____

IV. Re-establishing Outreach Component of RED

22. Define what "outreach" means in this context. _____

_____

23. How many outreach sites have been established since the introduction of RED nation-wide?

_____

24. What proportion of the targeted population is reached through outreach and mobile service delivery?

_____

V. Links with the Community Component of RED

25. What activities have been carried out to facilitate and strengthen links with the communities in the following areas?

a) Advocacy: _____

b) Partnership building: _____

c) Communication to improve community demand for immunization: _____

_____

d) Other: _____

26. What are the major challenges, constraints and/or opportunities for strengthening links with the community? _____

Other comments: (such as, special projects, plans to expand RED, who are in-country partners?)
_____

_____

_____

_____

_____