

## **Evaluation of GAVI Immunization Services Support Funding Case Study: Kenya**

This report presents findings from one of six country case studies conducted as part of a Global Alliance for Vaccines and Immunization (GAVI) commissioned evaluation of the Immunization Services Support (ISS) funding mechanism. The ISS funding mechanism provides performance-based funding aimed at improving routine immunization. The goal of the evaluation was to assess the impact of ISS funding in furthering GAVI objectives and to identify ways to improve the ISS scheme. This report is a working paper that informs the final report. In addition to information from the six country case studies, the evaluation incorporated data from a desk review of 52 countries. It is recommended that this report be read in conjunction with *Evaluation of GAVI Immunization Services Support Funding*, which provides a full description of the background and methodology for the evaluation.

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## 1. Description of Visit

A two-person team comprising of Natasha Hsi from Abt Associates and Rebecca Fields from AED visited Kenya from March 22-April 1, 2004. Trip activities included a series of interviews with officials from the Kenya Expanded Programme on Immunisation (KEPI), other officials from the Ministry of Health (MOH), technical advisors from WHO and UNICEF, other active members of the Interagency Coordinating Committee (ICC), and the national coordinator within the MOH for the Global Fund for AIDS, Tuberculosis and Malaria (Global Fund).

KEPI provided the study team with open and ready access to a wide variety of documents and data, including monthly reports since 2002 and financial data from 77 districts on GAVI-supported “accelerated routine immunization”.

Because of the brevity of the visit, KEPI arranged for the study team to make one-day visits to the districts of Nakuru and Thika, both located within a two-hour drive of Nairobi. During the field visits, the study team met with district health staff, reviewed district data, and visited one health center per district.

Four methodological limitations of the Kenya study are:

1. During district visits, it was not possible to meet with the district public health nurses (DPHNs) – the district level managers for immunization--in Nakuru and Thika because all DPHNs were in an IMCI training course;
2. Despite the wish to make before/after comparisons for some interventions supported with ISS funds, this could not be done because of lack of data, mostly from the pre-intervention period; this reflects the evolution of the record-keeping and reporting system itself, which KEPI is actively working to upgrade;
3. Few people interviewed had been in their position for more than 1-2 years, limiting the ability to collect historical information on the application process and the evolution of planning and allocation processes for GAVI ISS funds.
4. Due in part to difficulty in confirming visit dates with the MOH, efforts to set up meetings with high level officials from the MOH and some other agencies proved unsuccessful; this limited the ability to obtain perspectives from those in a position of authority.

## **2. Context**

### **2.1. Country Background**

According to U.N. figures cited in the UNICEF State of the World's Children 2004 report, Kenya's population is estimated at 31.5 million people with approximately 3.5 % of the population under one year of age. The population growth rate is estimated at 2.9%. The under five mortality rate is estimated at 122 deaths per 1000 children under five and the infant mortality rate is approximately 78 per thousand live births; the latter represents an increase from the estimate of 62 during the period 1993-1998—a change that is thought to be, in part, attributable to the impact of HIV/AIDS.

### **2.2. Health System Context**

Administratively, the country is divided into eight provinces and, as of early 2004, 77 districts. The number of districts has increased considerably over the past ten years and even since the baseline year (1999) for the GAVI application, creating some complications for data analysis in this report. There are approximately 2500 service delivery points throughout the country. Health centers are usually managed by a clinic officer plus other staff, including different categories of nursing staff. Enrolled community nurses are generally the providers of vaccinations.

Economically, Kenya saw a decline, particularly during the late 1990s, with the Gross Domestic Product annual growth rate from 1999-2002 estimated at -0.6%. During this same time, inflation was estimated at 13% annually, and the Kenya Shilling (KSh) was devalued successively; however, it has remained relatively stable during the past 2-3 years at an exchange rate of approximately KSh 77= US\$ 1.00. In late 2002, a new president, Mwai Kibaki, was elected; this represented an upset to the long-held power retained by the previous president and party. This victory has created a renewed atmosphere of energy, transparency and hopes for new business prospects and economic development —although the latter have yet to be realized. The election also resulted in considerable turnover among government personnel at managerial and policy levels.

### **2.3. Health financing**

Under the new budgetary system introduced by the Government of Kenya, all expenditures by the Government and external partners must fit into the Medium Term Expenditure Framework (MTEF). Recurrent expenditures including salaries, physical development expenditures and any specific line items must be declared under the MTEF ceilings.

Each year, each sector goes through a budgeting and planning process which culminates in the presentation of the government budget to Parliament in June. The fiscal year then runs from July 1 to June 30. The budget is comprised of the recurrent expenditure book and the development book. Allocations are made to each Ministry by the Ministry of Finance.

## **2.4. Immunization background**

### **2.4.1. Organization, structure, and staffing**

The Kenya Expanded Programme on Immunisation (KEPI) was created in 1980 and was gradually introduced in phases throughout the country between 1980 and 1990. Currently, KEPI is an established unit within the Division of Preventive and Promotive Services in the Ministry of Health (see MOH organogram in annex 5). The National Health Sector Strategic Plan for 1999-2004 has identified KEPI as one of seven programs in its “high priority” category, which refers to priority in terms of allocating government resources. The MOH is about to embark on a new strategic plan for 2005-2010 and the Director of Preventive and Promotive Services in the MOH has stated that KEPI will remain in the top priority category.

As outlined in the current National Health Sector Strategic Plan which recommends decentralization to provincial and district levels, KEPI retains responsibility for the development of policies and standards, donor coordination, vaccine procurement, technical assistance to lower levels, operational research, and monitoring and evaluation. Districts are responsible for planning and implementing workplans, providing training and supervision, managing data and health services overall. Provinces provide districts with supervision and technical assistance. Within this organizational structure, personnel are not delinked; that is, with regard to immunization, District Medical Officers for Health (DMOHs) report to Provincial Medical Officers for Health (PMOHs), who in turn report to KEPI. Currently, immunization data flow from facility to district to province to KEPI. This represents a revision to previous guidelines, in which districts were to send data concurrently to provincial level and KEPI; the change in procedure was made because there had been instances of districts sending EPI data directly to KEPI (in order to meet deadlines), bypassing the provinces and making it difficult for the latter to fulfill their supervisory functions.

Currently, the KEPI Management Unit at central level has a staff of over 20 professionals (see KEPI organogram annex 5). Notable in this structure is the heavy emphasis on data management and disease surveillance. Recognizing the chronic issue of underreporting (discussed throughout this report), KEPI increased its staffing in the area of records/statistics such that different information officers are assigned to collect and analyze data from different geographic areas of the country. In addition, at the time of

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this visit, CDC had provided a STOP team member to provide support for data management, particularly with regard to collecting and cleaning 2003 immunization data.

### 2.4.2. Immunization Coverage Trends

Population-based surveys plus routine administrative data provide an overview of immunization coverage since the late 1980s. During the late 1980s through early 1990s, coverage increased rapidly and steeply, especially for later doses in the vaccination schedule (DTP3, measles). High levels of coverage were attained during the mid-1990s before falling off in the late 1990s, just prior to the inception of GAVI. An important aspect of immunization coverage figures in Kenya is over the past 15 years, it has been noted that coverage as reported by routine administrative reporting is consistently and considerably lower –usually by 20 to 40 percentage points -- than estimates from population-based surveys. This is attributed to incomplete and inaccurate reporting originating from the facility level. This issue of underreporting is discussed further in sections 6 and in discussions of KEPI efforts to strengthen immunization, including decisions regarding the use of ISS funds.

### Estimates of immunization coverage according to different sources, Kenya, 2000-2003

(All data derived from tables 4A, 4B, and 5 on Joint Reporting Forms obtained from WHO/Kenya)

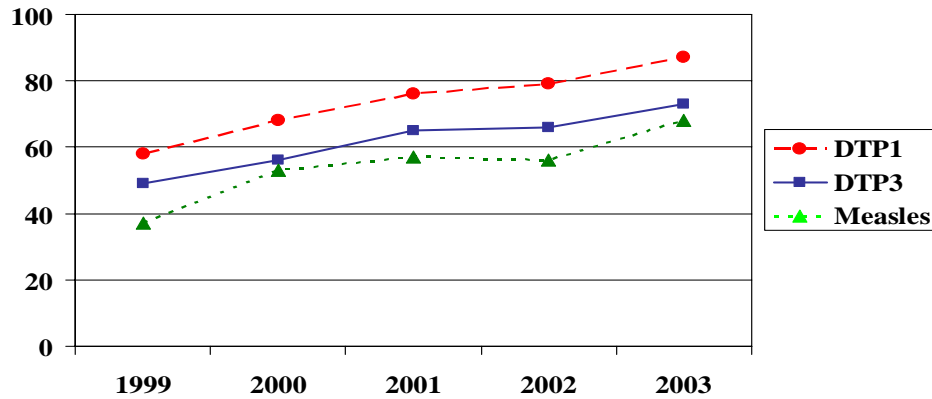
Anti-gen	2003			2002			2001			2000		
	Ad-min-istrative	Survey (prelim. DHS data; 12-23 mo. olds)	Official estimate	Admi-n-istrative	Survey (measles campaign survey; 12-23 mo. olds)	Official estimate	Admi-n-istrative	Survey (MICS; by 12 mo. of age)	Official estimate	Admi-n-istrative	Survey (1998 DHS; by 12 mo. of age)	Official estimate
BCG	87	87	87	77		91	81	94	94	51	89	75
DTP1	87	89	89	78	90	90	77	92	78	57	61	73
DTP3	73	73	73	65	84	84	66	79	80!	53	45	63
OPV3	75	67	75	62	83	83	58	77	78	47	NA	62
Measles	69	72	72	55	78	78	58	71	75	46	40	NA
TT2+	66	NA	66	63	60	60	67	NA	85	38	NA	51
% of district reports received	99.9			92			97			82		
% of facility reports received	NA			81			78			35		

The apparent trends in immunization coverage since 1999 vary by source of data. The graph below presents trend data for DTP1, DTP3 and measles for 1999-2003 based on

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routine administrative data provided to the ISS study team by KEPI during this visit. It suggests a slow and steady increase in numbers of children immunized.

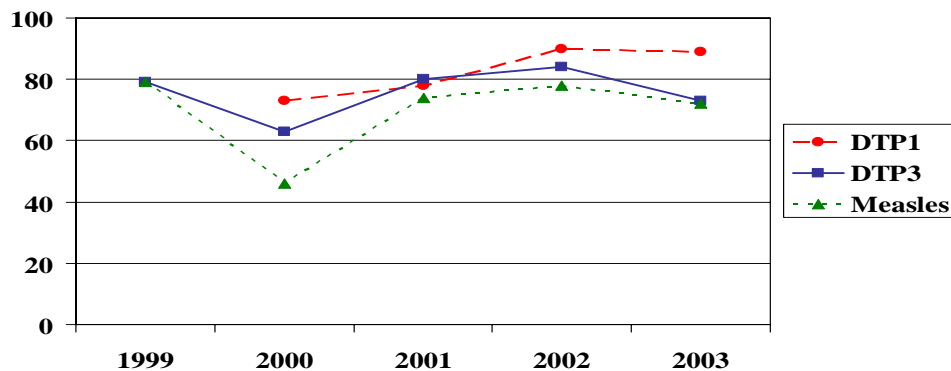
### Kenya EPI coverage, 1999-2003 (Source: KEPI/MOH administrative data)



A somewhat different picture emerges (see below) when official estimates of coverage from table 5 of the Joint Reporting Form (JRF) are used. These suggest that coverage has not changed substantially

### Immunization Coverage by Antigen, Kenya, 1999-2003

(Source: official country estimates from Joint Reporting Forms)



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The difference between estimates is attributed to the completeness and accuracy of reporting, which has improved over the years through KEPI and partner efforts that are described in this report.

The issue of estimating the proportion of children protected from vaccine-preventable diseases is further complicated by preliminary data from the 2003 Demographic and Health Survey (DHS). These data were collected during April –September 2003, and therefore for immunization purposes, reflect activity some 12-23 months earlier, i.e., April 2001-September 2002. The DHS results are now being contested by the Government, but they suggest that DTP3 coverage may have fallen by approximately eight percentage points since the 1998 DHS—which itself covers a period of activity some 12-23 months earlier. The ability to interpret trends is further complicated by current debate regarding the confidence intervals reflected in both the 1998 and 2003 DHS.

While routine administrative data strongly suggest that there have been considerable and steady improvements since 1999, it is difficult to say whether they represent increases in the number of children immunized or improvements in reporting, or both. In fact, KEPI and its partners have made strong efforts to improve both immunization coverage and reporting.

### **2.4.3. The ICC**

The ICC was created during the late 1990s, in conjunction with planning and conduct of polio National Immunization Days. In interviews, some longtime ICC members described that at the time of the GAVI application in 2000, the ICC was functioning at a high level (“it was exemplary”, according to one interviewee) and served as an example for other programs. Meetings were regularly scheduled, well-planned, and discussions usually addressed time-limited and concrete events, e.g., campaigns or the GAVI application. Of particular importance, the meetings were chaired by the highest levels within the MOH: first the Permanent Secretary, and later, the Director of Medical Services. This level of representation, in turn, attracted high level representation from partner agencies.

### **2.4.4. Accomplishments and Challenges in Immunization in Kenya**

According to those interviewed, a major accomplishment in immunization overall was the nationwide vaccination campaign conducted in June 2002. This included a nationwide measles catch-up campaign for ages 9 months to 14 years, as well as subnational immunization days for polio in several districts, plus maternal/neonatal tetanus campaigns in seven districts. Between the intensive preparations and the follow-up evaluations, the campaigns were a major focus for KEPI activity in 2002.

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Other accomplishments and challenges during the past few years include the introduction of A-D syringes for all immunization, the nationwide introduction of pentavalent vaccine starting in November 2001, the introduction of yellow fever vaccine in four districts (with GAVI/Vaccine Fund support), and the two Data Quality Assessments (DQAs) that took place in 2001 and 2002.

The introduction of pentavalent vaccine (DTP-Hepatitis-Hib) was cited by many interviewees as a particular challenge, bringing with it major concerns about reliability of vaccine supply plus financial sustainability after 2005. The KEPI manager described pentavalent vaccine as the foremost challenge facing KEPI. Since its introduction in late 2001, there have been problems stemming from the extremely limited supply of the vaccine at global level. Reported consequences include that KEPI has been unable to request buffer stock; some deliveries have been late; and some deliveries have been split, with only part of the expected quantity delivered on a given date. In one instance, the national level took delivery of pentavalent vaccine about five weeks later than expected when supplies in country were already depleted. Pentavalent wastage rates, at least initially, have been higher than expected. Taken together, these factors have led to stockouts at district and facility level and multiple emergency situations where KEPI has had to quickly move stock from one district or regional depot to another. At facility level, the unavailability of pentavalent vaccine has allegedly eroded the confidence of caretakers (see section 5.1 for observations on this situation in Nakuru district) and has led to problems in improving DTP3 coverage, since DTP indicators are now related to pentavalent vaccine availability and management. (Not only in Kenya but also in Uganda has there been evidence of the impact at country level of the global shortage of pentavalent vaccine; in Uganda, it was not possible to provide pentavalent vaccine for a six-month period.)

Regarding the DQAs, Kenya fell far short of the “passing grade” of 0.80 for the verification factor that measures the correspondence between recorded and reported coverage. Kenya achieved a factor of 0.401 in the pilot DQA in June 2001 and a factor of 0.496 in the September 2002 DQA. Because of this, Kenya was disqualified from receiving ISS reward shares. The findings of the DQAs highlighted problems that had previously been recognized by KEPI and technical partners but had received only limited attention. Following each DQA, KEPI sent out letters to DMOHs, apprising them of the key findings from the DQA and instructing them on corrective actions. With substantial input from the local WHO immunization advisors, KEPI used the DQA findings as a diagnostic on which to base the development of tools to improve district and facility level data collection and management (the KEPI “Performance Management Handbook”). In September 2002, KEPI launched a series of meetings with provincial and district health team members to improve data collection and management. They provided districts with notebooks to facilitate the organization of files and introduced a drop-out monitoring



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chart for use at facility level. In 2003 and 2004, this has been followed up with training for all districts and staff from facilities on data management and use.

In part because of the issues regarding pentavalent vaccine and the need to reduce vaccine wastage rates, a second tool—a manual on improving vaccine management--has been developed by WHO and KEPI. District level training on the use of this manual commenced in early 2004. Kenya's wastage rates for pentavalent have exceeded the 10% recommended by GAVI and are now more in the range of 10-20%. The KEPI manager acknowledged the need to reduce wastage of pentavalent vaccine, but also expressed concern that strategic planning to attain high levels of protection should be the primary driving force for using any vaccine.

### **2.4.5. KEPI Funding**

With regard to program funding, prior to 2002, KEPI received all of its budget for recurrent expenditures under the development book. Through this allocation, KEPI purchased vaccines, maintained national level KEPI and allocated funding to districts for gas and transport. In FY00/01 (i.e., from July 1, 2000 to June 30, 2001), KEPI received KSh60 million. In FY02/03, a line item for vaccines was established. As a result the development budget for KEPI was reduced to KSh 38 million with KSh 30 million going towards the budget line item for vaccines. Funding for the KEPI development book was increased to KSh 40 million and funding for vaccines was increased by KSh 32 million for vaccines in FY2003/04. Districts receive funding for immunization both from the treasury through recurrent district allocations, and directly from KEPI.

## **3. GAVI-Associated Developments**

### **3.1. Application process**

Because of turnover within the Ministry of Health in recent years, the ISS study team was able to speak with only three individuals with first-hand experience in the development of the application to GAVI: representatives from WHO, DfID, and JICA. The KEPI manager and other key staff in KEPI were not holding their current positions, nor was the Director of Medical Services (Chair of the ICC), the Director of Preventive and Promotive Services, or the UNICEF immunization project officer.

Kenya was among the first round countries to apply for ISS cash support and new vaccines. Although an EPI review had already been conducted in 2000, a multiyear plan had not been developed prior to the GAVI application process. With the assistance of WHO and UNICEF, KEPI organized a retreat to draft a strategic plan for 2001-2005, which was submitted with the application. The ICC reviewed the application, but it was primarily UNICEF and WHO who supported KEPI in the application process.

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Interviewees reported that, at the time of the application process in mid-2000, KEPI was very much in need of funding for routine immunization. During the late 1990s, such support had dwindled, and KEPI was occupied primarily with carrying out polio National Immunization Days (NIDs). However, the appeal of the opportunity for additional funding through GAVI did not override the government's serious consideration of the performance-based aspect of ISS funding; according to those interviewed, the MOH did have a strong understanding of the conditions to be met to obtain subsequent funding after the investment tranches.

The application that Kenya submitted to Kenya in June 2000 was for both the ISS and New and Underutilized Vaccines accounts. The latter requested DTP-hepatitis B vaccine to be introduced in July 2001 and Hib to be introduced in 2002. The original application cites a general objective of increasing coverage to 90% in all districts and lists several country concerns, six out of seven of which concern programmatic issues surrounding new vaccine introduction. While key issues arising from the immunization program review in 1990 are cited, the application does not provide specific ideas as to how the ISS funds would be used to increase routine immunization performance.

In July 2000, Kenya was approved with clarifications for ISS funding and DTP-Hepatitis B-Hib (pentavalent) vaccine. Kenya provided clarifications in late August and the application was officially approved in September 2000. The first tranche of ISS funds was received in country in February 2001. The country was also provided with pentavalent (not quadrivalent) vaccine, despite the lack of a strong evidence base for the burden of Hib disease. This had not been required by GAVI at the time. Kenya does participate in the WHO/AFRO pediatric bacterial meningitis network and a study to determine burden of Hib disease in Kenya was proposed, but not funded. Pentavalent vaccine was introduced in late 2001.

### **3.2. Setting of targets in the GAVI application**

The issue of the targets used in the GAVI proposal is still a matter of some debate as of early 2004. In its initial proposal to GAVI in June 2000, the baseline number of children vaccinated with DTP3 in 1999 was based on extrapolations from the 1998 Kenya DHS. However, as mentioned above, population-based survey estimates in Kenya are traditionally 20 to 40 percentage points higher than estimates from administrative immunization data. In the GAVI proposal, the baseline figure that was used was 825,592 whereas the same figure from 1999 routine administrative data obtained from KEPI during this visit was 508,566. Additionally, the original proposal called for high coverage gains (including a 58% increase in one year). Based on IRC review, GAVI requested clarifications, including an explanation of the baseline and a revised set of

targets. KEPI responded by considerably reducing the targets but adhering to the use of the baseline figure because it was thought to be the most accurate estimate of coverage.

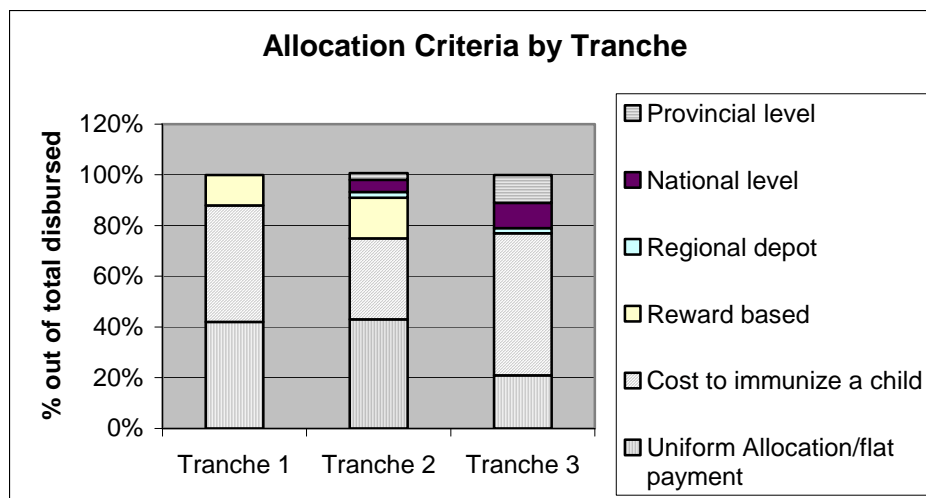
The upshot is that even as Kenya has been able to reach and surpass its targets for *additional* children to be immunized from baseline to later years, based on routine administrative data, it will virtually never be able to achieve the application's targets for *total* number of children vaccinated in a given year. (See annex 4). The current KEPI team, which includes no members of the original team involved in the application process, is very concerned and fears that it may never qualify for reward shares because of the inappropriate baseline insisted on by the previous team. KEPI and key ICC members are currently considering whether and how best to appeal this issue.

## **4. National level**

### **4.1. ISS planning and allocation process**

Kenya's planning and allocation process at the national level reflects both a clear understanding of the ISS performance-based approach and conscious effort to evaluate and refine its allocation strategy based on ongoing review of experience. Understanding of the performance-based approach is evidenced by the fact that disbursements of the first tranche to districts included a financial reward for additional children immunized from 2000 to 2001. Set within the context of Kenya's own political and social requirements for equity, however, the rewards-based approach is balanced with a needs-based approach in order to give all districts the opportunity to benefit from the funds. That is, all districts receive a base allocation, but can receive additional funds based on performance and other factors detailed below.

In consultation with the ICC, KEPI decided that the majority of ISS funding would be allocated to districts, with some funding retained at national level and some provided to provinces, as shown below:



	<i>Tranche 1</i>	<i>Tranche 2</i>	<i>Tranche 3</i>
Uniform Allocation/flat payment	42%	43%	21%
Cost to immunize a child	46%	32%	56%
Reward based	12%	16%	0%
Regional depot	0%	2%	2%
National level	0%	5%	10%
Provincial level	0%	3%	11%

Although the proportions have changed somewhat from tranche one to three, the changes are not substantial and cannot be easily discerned from reading a description of the allocation criteria for each tranche. While on the surface, it seemed that there was a different rationale for each tranche, KEPI only reshuffled the categories a little and became more specific about the use of the funds.

For the first tranche of ISS funds, KEPI and ICC members, particularly WHO and UNICEF, developed the following criteria to allocate the funds to the districts:

- size of the under one population
- Number of children immunized with DTP3 in 2000
- Level of difficulty in reaching the zones within the districts (classified into 3 different categories with 3 different costs per fully immunized child)
- Flat payment of KSh 500,000 to every district
- Reward payment based on additional number of children immunized from 1999 to 2000

During this same time, WHO held extra funds left over from polio campaigns and chose to pool these extra funds with the GAVI ISS money. As a result, the amount of money available to districts according to the above criteria doubled. For the first tranche of ISS

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funding, 34 districts received funding from the GAVI ISS funding and 43 districts received funding from WHO. A ceremony was held in Nairobi in April 2001 at which all districts received checks and guidelines on the use of ISS funds from KEPI and the MOH Permanent Secretary.

KEPI issued brief written guidelines to all District Medical Officers for Health (DMOHs) on the intended use of these funds; however, the DMOHs had wide flexibility and discretionary power regarding their use. For this first tranche, districts did not submit financial returns on the ISS funding, nor did they submit accelerated routine immunization activity reports. During the 2001-2002 period following receipt of the first tranche of funding, KEPI observed that DTP3 coverage increased by 17 percentage points.

After the disbursement from the first tranche, many politicians and district health officials complained, demanding higher district disbursements for their particular districts for a variety of reasons. As a result, KEPI took deliberate steps to make the criteria for allocating funds to districts completely transparent. For allocations from the second tranche of ISS funds, the following criteria were used:

- 30% of ISS funds were allocated based on the operational cost per child immunized in each district, as estimated during the 2002 measles campaign.
- 40% of ISS funds were allocated based on the target population per district.
- 15% of ISS funds were allocated based on the district's performance from 2001 to 2002. This reward mechanism was only awarded to districts which had improved performance, and it was based on the proportional increase of number of children immunized.

Of the remaining 15% of ISS funds, 10% were reserved for the national and provincial levels and 5% were reserved by KEPI for as a reserve fund.

In the interests of transparency, KEPI provided each district with the entire spreadsheet indicating the criteria and levels of allocations for all districts. In addition, all districts received specific instructions, developed by KEPI (with input from WHO and UNICEF and approval from other ICC members) but issued by the MOH Permanent Secretary on the use and management of those funds.

Experience with the second tranche of funds appeared disappointing: coverage increased by only three percentage points in 2002. Feeling that a saturation point had not yet been reached for achieving performance improvements with the ISS funds, KEPI and its partners gave serious thought as to how additional ISS funds could best be used.

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For the third tranche of funding, KEPI decided to target the use of the ISS funds much more specifically than had been the case in the first two tranches. KEPI specifically directed districts to use the GAVI ISS funds for supportive supervision – to reach every health facility at least once per year. Guidelines for supportive supervision at the health facility level were developed by KEPI, signed by the Permanent Secretary, and sent to districts. Although developed by KEPI, the guidelines for supervision were meant to build capacity beyond immunization. To ensure that there would be sufficient funds for supervision visits, KEPI determined the ISS allocations to districts based on the estimated average cost of reaching each health facility from the district headquarters. A small amount of the funds was also given to districts for gas, vaccine distribution, maintenance of cold chain equipment, data management, social mobilization and outreaches. Although the amount received by districts for the third tranche depended on the amount of fuel necessary to travel from the district headquarters to each health facility, the districts still had the flexibility at the district level to determine exactly how to use the ISS funds. It is important to note that KEPI used the same allocation criteria to distribute both GAVI ISS funds and KEPI GOK funds to the districts.

The planning and allocation process for ISS funds appeared to be conscientious and carefully considered by KEPI and its partners. The evolution of the allocation criteria from the first to the third tranche reflects KEPI's deliberations at the national level. In general, there was a move toward less reward-based allocations, and more prescriptive guidelines to districts on how to use the funds.

### **4.2. National level management of ISS funds**

Support from GAVI both in terms of vaccines and cash support has not been declared under the Medium Expenditure Framework (MTEF) ceilings, nor has it been channeled through the Treasury. As a result, KEPI has received funds directly from GAVI into a commercial bank account, and districts received and treat ISS funds as another source of funding coming directly into their district commercial bank account. It should be noted that these commercial bank accounts had already been set up to accommodate funding for the National Immunization Days, in order to facilitate rapid disbursement of funds to the district level. The Permanent Secretary convinced the Ministry of Finance to let the GAVI funds flow directly to these commercial bank accounts, thereby allowing ISS funds to bypass not only the GOK accounting procedures but also the GOK planning and budgeting cycle.

The ISS funds are held in a MOH/KEPI account at Standard Chartered Bank. This US dollar separate bank account is reserved for GAVI ISS money. Another parallel account in Kenyan Shillings was created to disburse funds to the provincial and district level.

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Although KEPI instructed districts to file monthly GAVI activity reports with financial returns, few districts did so in the first tranche. For the second tranche of funding, KEPI sent guidelines to districts instructing them to send in monthly reports on “MOH-GAVI Accelerated Immunization activities” as well as monthly expenditures. But in reviewing the KEPI district binders containing the monthly reports, the ISS study team found that financial returns are often missing. Many of the monthly reports contained vague summaries on how ISS funds were spent such as “transport = KSh 30,000” but often no details on why the transport funds were needed, and receipts were generally not attached. While KEPI knows how much each district received for each tranche, and receives some narrative description of activities, in reality, it has little documentation as to how the funds were actually spent at the district level. There is no reconciliation of expenditures at the national level of funds issued to the district.

KEPI chose to disburse the three tranches of GAVI funding on a deliberately slow schedule to avoid misuse of funds by the districts and to encourage steady increases in coverage without overrunning the system with too much money. As a result, all three tranches have been disbursed much later than the receipt at the national level.

The first tranche of funds was transferred from the GAVI Secretariat to the Standard Chartered Bank account held in the name of MOH/KEPI in February 2001. A parallel account held in Kenyan Shillings in March 2001 in the name of MOH/KEPI to disburse funds to provinces and to districts in Kenyan Shillings. In April 2001, allocations in Kenyan Shillings were made from KEPI to provincial officers and to district medical officers through specific GAVI accounts at the respective provincial and district levels.

The second tranche of funding, of equal size as the first tranche, was received in Kenya in April 2002 but was held by KEPI until November 2002. The disbursement was deliberately postponed after the measles campaigns in June 2002 to ensure that the ISS funds would not be used inadvertently confused with or used for the measles/polio/tetanus campaign. Since the second tranche of funding was not “matched” with additional WHO funds (as had been the case in the first tranche), the districts received considerably less funding in the second tranche.

At the request of KEPI, the third tranche of funding was split into two separate payments each of \$378,000. At this point in time, KEPI was under pressure from the Minister of Health, the Permanent Secretary and the Director of Medical Services because Kenya had failed its second DQA and would not be eligible for reward shares. The third tranche was received in June 2003, but payments to districts were held until after Christmas both to allow sufficient time to develop an alternative technical rationale for districts disbursements and to avert the possible misuse of ISS funds in the pre-holiday season.

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There are four signatories on the MOH/KEPI account, two of which are national level signatories (the Permanent Secretary and the Director of Medical Services). The other two signatories are the Chief Finance Officer and the Principal Accounts Controller of the Ministry of Health. KEPI receives microplans and budgets from the districts and submits them to the ICC for review, which then gets approved by the Director of Medical Services and the Permanent Secretary. Once the Permanent Secretary signs off on the allocation, funds are immediately transferred to the districts in their commercial bank accounts.

For purposes of comparison, it is important to understand how GOK funds are usually accessed by KEPI because it sheds light on why GAVI ISS funds are viewed as efficient, accessible and useful to districts. All expenditures by the GOK follow these procedures regardless of amount, whether it be KSh 100 or KSh 1 million, although purchases above KSh10,000 do require competitive quotes. After receiving approval from the Permanent Secretary (either he or his deputy literally signs off each request), the request for expenditure is returned to the KEPI Manager. The request is turned into an impress warrant by the Primary Health Care accountant, who then brings the impress warrant to the impress office at the Ministry of Health. The Chief Finance Officer at the Ministry of Health authorizes the expenditure and send it to the examination section for further review. It is at the examination section that the expenditures are checked against the Vote Book (allocation for the specific division) to confirm that the funds are available and that there are no other outstanding impress warrants. The senior accountant signs off on the impress warrant and forwards it to the internal audit office before it goes to the cash office for issue of either cash or check. What is remarkable about this process is that this process applies to any GOK expenditure and the fact that the Permanent Secretary has to sign off on each and every request.

Disbursement problems can arise at any level and are returned to KEPI for further information. Furthermore, KEPI can only have one warrant impress out at any one time. Although some exceptions have been made so that two or three warrants have been issued, any delay in bringing back the original receipts with the payment voucher back to the PHC accountant results in a denial of future impress warrants. In reality, this means that if an impress warrant was issued for transport allowances to provincial medical officers to attend a KEPI training, and the receipts have not been returned on time, then the logistician cannot order maintenance parts for the cold room in an emergency.

## **5. District level**

### **5.1. Planning, allocation, and utilization of ISS funds**

The ISS study team made one-day visits to Nakuru and Thika districts, accompanied by the Deputy KEPI Manager. Both districts have large populations and are urbanized to

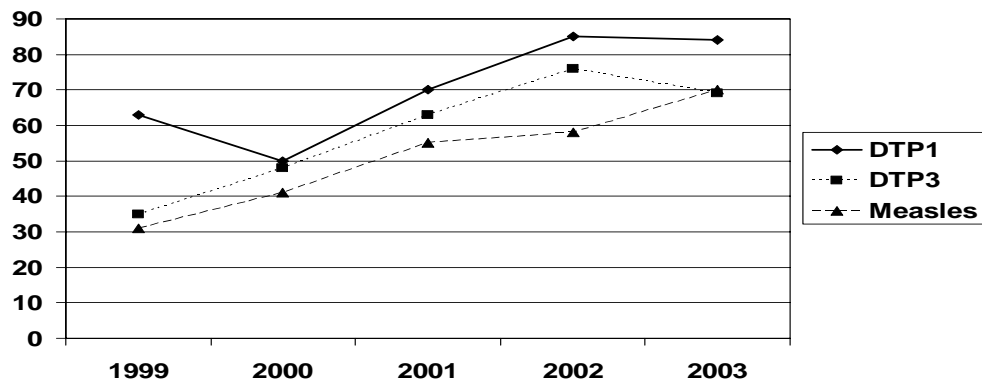


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some extent, and both have easy access to Nairobi, less than two hours away, along good roads. Both districts are relatively high performing, although Nakuru has problems that are common throughout the country. Because the district public health nurses (DPHNs) responsible for managing immunization were in weeklong training, the team conducted interviews and facility visits with the deputy DPHNs. The team visited one health center in each district.

Nakuru is one of the most populous districts in Kenya. With a population of 1.4 million people, it is comprised of 16 divisions, including a major municipality with an autonomous government. The district has approximately 172 health facilities that provide vaccinations, including many run by private practitioners. Immunization coverage for Nakuru from 1999-2003 is shown below.

**Trends in Immunization Coverage,  
Nakuru district, 1999-2003**  
(source: KEPI)



The ISS study team interviewed the deputy DPHN, who had not been aware that the visit was to take place. In broad terms, he described the main challenges to immunization in Nakuru as being the large geographic area and population, the recent creation of new divisions, seasonal impassibility of roads, and new settlements in remote mountains and forest areas.

The deputy DPHN was readily aware and very appreciative of the GAVI funds, and described them as being dedicated to immunization activities. He was not aware of the performance-based dimension of GAVI funding, or the fact that GAVI funding would be suspended because of the failed DQA. Nor was he aware that KEPI had provided guidelines to districts on how to use the ISS funds. Without hesitation, however, he described the activities supported by the ISS funds in Nakuru and the rationale for each. They were:

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- Improving the quality of data through more complete and accurate reporting
- Improving vaccination and cold chain management skills
- Expanding outreach in areas with low coverage for all antigens, so as to reach the unreached
- Vehicle repair and maintenance
- Supervision visits, including fuel and lunches
- Repairs and troubleshooting for refrigerators
- Meetings with NGOs, to increase their engagement in immunization
- Hiring of coordinators for 8 zones within this large district—to provide supervision and collect monthly reports

Because some immunization records were locked in the office of the DPHN, it was not possible to review detailed records prior to 2003. It is possible that there were records that would have allowed analysis of whether supervision, outreach, and reporting had improved relative to the period prior to ISS funding. (However, given longstanding problems with record keeping, it may be that such records did not exist.) With regard to changes immunization reporting completeness just during 2003, there was a slight increase – from 82% to 86% - in comparing the first and second halves of the year.

The deputy DPHN described that decisions about allocations of GAVI funds were made in the course of weekly management meetings with the complete district health management team. District level staff appreciated not only the amount of money received from GAVI, which replaced previous financing through cost-sharing, but also the availability of funding without the rigorous government accounting procedures. While acknowledging the extra workload of the monthly activity reports that KEPI had instituted with the second tranche of GAVI funding, they felt that it was “not so bad” as it helped ensure that funds were used for their intended purpose. District staff said that the fact that GAVI funds became available at times different than the annual planning cycle posed no problems and, in fact, helped ensure continuous funding even in low times for Government funds, i.e., immediately following the end of the fiscal year.

The major concern for immunization raised by the deputy DPHN was the unreliability of pentavalent vaccine supply—a consequence of problems with global pentavalent vaccine supply described earlier in this report. The vaccine has been in only intermittent supply in Nakuru for several months. During a visit to Njoro Health Center, the team explored this further. The clinic officer there described major “hills and valleys” of pentavalent stock: the community quickly learns when the vaccine is unavailable, and that keeps people away from immunization services. When the community learns that the vaccine is in stock, high numbers of patients –including the backlog—seek services, so the supply is quickly consumed. Health center staff expressed the desire to have DTP vaccine available as back-up, so as not to erode the community’s confidence in health services.

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A review of Njoro health center's monthly summary sheets for the previous six months confirmed the issue of intermittent supply. In each month, the number of working days when pentavalent was unavailable (but OPV was being given) was as follows:

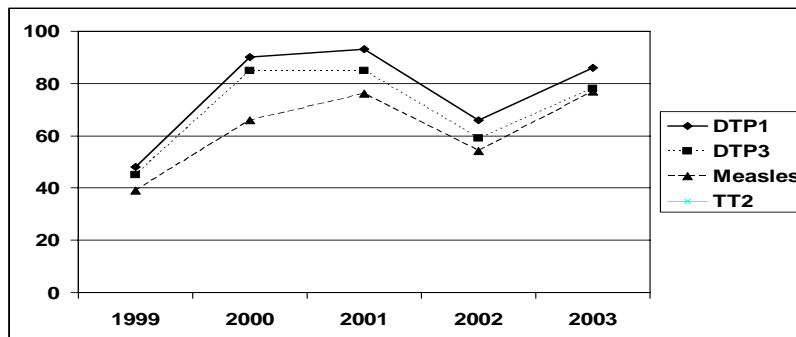
- October 2003: 7 days
- November 2003: 6 days
- December 2003: 13 days
- January 2004: 6 days
- February 2004: 7 days
- March 2004: 12 days

Both district and health center staff (and later, KEPI staff) raised concerns that this situation leads to a situation of decreasing protection against pertussis and tetanus; they also pointed out that it limits their DPT3 coverage.

The ISS study team also visited Thika district, located about an hour drive from Nairobi. With a population of over 700,000, and six divisions, Thika has a substantial industrial base but also includes large rural areas. There are approximately 84 immunizing facilities, of which about 50% are missions, NGOs, or private practitioners. Thika's coverage since 1999 is shown below.

**Trends in Immunization Coverage,  
Thika district, 1999-2003**

(source: KEPI)



The team met first with a deputy to the DPHN before being joined by the DMOH. The deputy DPHN stated that GAVI funding was critical to immunization operations as the funding available from the government was insufficient to bring about improvements. She cited as obstacles to high routine immunization performance the need to distribute vaccines to all facilities, the need for outreach to get to outlying populations, social mobilization to ensure that outreach is well-attended, and better health worker skills,

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including for reporting. As in Nakuru, the deputy DPHN was not aware of the performance-based aspect of GAVI funding or the need to pass the DQA; however, the DMOH had some understanding of each and also knew about the guidance on GAVI funds sent out by KEPI.

As in Nakuru, the deputy DPHN described an ongoing consultative process by the DHMT for allocating ISS funds. She said that they were used for the following:

- Collect vaccines from Nairobi and reimburse facility staff for transport when they collect vaccines from the district store
- Outreach for hard to reach populations
- Investigation of suspected cases of disease by public health officers
- Training and updates to health workers for any new developments
- Repair and maintenance of cold chain at facility level
- Social mobilization – to get health workers into the community
- Monitoring and supervision, including collecting monthly reports

The deputy DPHN felt that the funds had been particularly important in engaging the private sector (to get them to come to collect vaccines, knowing they'll be reimbursed for their travel) and in providing outreach. The district has managed to achieve and maintain levels of immunization reporting in excess of 90%. The problem of pentavalent vaccine supply was far less pronounced in Thika, limited to a single district level stockout of two weeks in 2003; they were able to dip into reserve stocks, thereby incurring an interruption of services of only three days. The proximity to Nairobi may have factored into the containment of this problem.

As in Nakuru, the district staff expressed great concern at the thought that GAVI funds would be discontinued because of Kenya failing the DQA. They did not see how they could continue outreach in the absence of these funds.

## 5.2. Management of ISS funds

Funding for health services at the district level flow from the Treasury to the Ministry of Health to districts through the recurrent book. This amount is minimal and most districts must supplement through cost-sharing at the health facility level. There is great frustration at the district level that they are collecting funds at the health facility level, but it is practically impossible to retrieve those funds after they enter the public Treasury. As a result, district level staff are very much aware that GAVI funding, which is withdrawn from a separate commercial bank account, does not have to go through the time-consuming government purchasing regulations. In Nakuru, the deputy DPHN asked for more guidance from KEPI on how to account for the funds and how the receipts should be handled. In Thika, the DDPHN had collected an entire folder with itemized receipts and bank statements showing the GAVI ISS fund expenditures. At the national level,

some district binders contained detailed itemized reports on ISS funds, while others contained one page with vague categories of expenditures. In general, there was a request for more guidance from KEPI on what was required for financial reporting. This is striking because GAVI does not impose any accounting guidelines on countries; nevertheless, the district staff interviewed were clearly asking for more guidance.

## **6. Changes in outcomes associated with use of ISS funds**

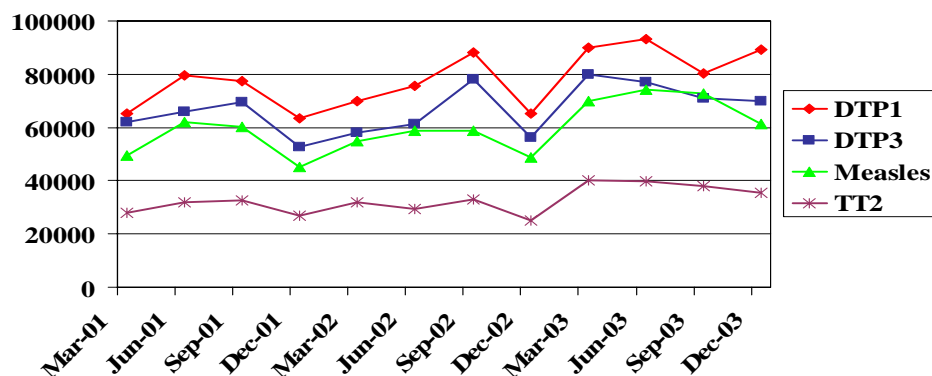
In this section, trends in performance that are concurrent with the receipt and use of GAVI funds are reviewed. In that GAVI ISS funds represent only about 10% of total recurrent expenditures, it would be misleading to attribute changes in outcome solely to these funds.

As already discussed in section 2.4.2, it is very difficult to say whether, in reality, there has been an increase in coverage over the past five years. Routine administrative data from KEPI suggest a slow and steady increase, which may, however, be an artifact of improved reporting. Official estimates from the joint reporting forms available in-country suggest a steady level of performance. A comparison of 1998 and preliminary 2003 KDHS data, still being contested, suggest a slight decline in immunization coverage. A more in-depth analysis that is beyond the scope of this study would be required to establish the true situation.

For the purposes of the more detailed analyses below, in which data that are disaggregated by district or month are used, KEPI administrative data are used.

In order to ascertain whether disbursements of ISS funds to districts resulted in short-term spikes in immunization activity, doses administered are shown below by month, relative to timing of release of ISS funds to districts. After an initial spike that followed the disbursement in April 2001 of the first tranche, no other spikes are visible that are associated with disbursements.

Trends in numbers vaccinated, Kenya,  
during 3 years of ISS funding, 2001-2003  
(source: KEPI routine administrative data)



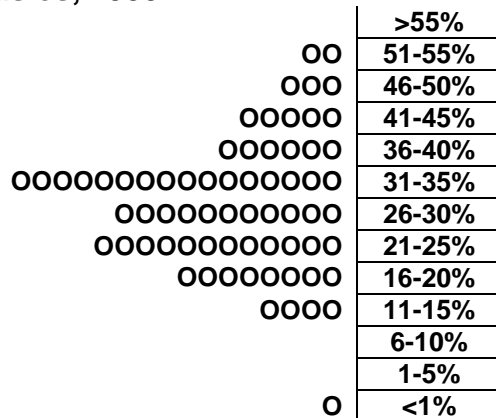
Even as DTP3 and DTP1 appear to increase since ISS funding was first disbursed, TT2 coverage remains relatively flat, with a pronounced increase in the first quarter of 2003 which is largely sustained throughout the year. This is in contrast to the sharp fluctuations observed with DTP1, DTP3, and to a lesser extent, measles. KEPI staff described the steep drop in late 2002 as being due to problems with pentavalent vaccine supply, which directly affects DTP1 and DTP3; they felt that this also acted as a deterrent to communities seeking measles vaccination. The steep increase in early 2003 is attributed to rapid immunization of the backlog, once pentavalent vaccine was received. While bearing this important issue in mind, the close correspondence between doses administered for DTP1, DTP3, and measles suggests that GAVI's focus on DTP3 has not led to "neglect" of routine measles vaccination.

High drop out rates have long been a problem for immunization in Kenya; they have been particularly high in the western districts. It is to be expected that the DTP1-3 drop-out rate will be lower than DTP1- measles because the former references a more limited timeframe than the latter. To examine whether the GAVI focus on DTP3 has adversely affected drop out rates for measles, a comparison was made of both DTP1-3 and DTP1- measles drop-out rates, by district, for baseline year (1999) and 2003. Results indicate that the DTP1-3 drop-out rate actually increased slightly from a median of 11% to 15%; also, whereas 8 districts showed DTP1-3 drop-out rates of over 25% in 1999, almost twice as many districts (15) had DTP1-3 drop out of over 25% in 2003. Again, KEPI staff attributed this change to problems with the availability of pentavalent vaccine supply. By contrast, the median DTP1-measles drop-out rate decreased by nine percentage points, from 30% to 21%, and the number of districts with drop-out rates over 35% dropped from 16 to 10.



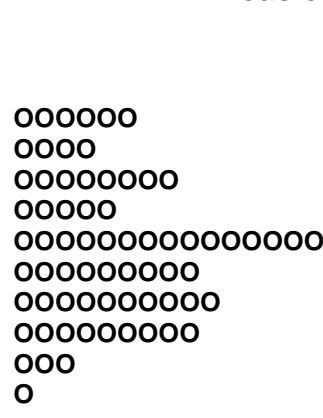
**Comparison of DTP1-Measles Drop-out Rates, Kenya, 1999 and 2003  
(Each circle represents one district)**

**DTP1-measles, 1999**



**Median = 30%**

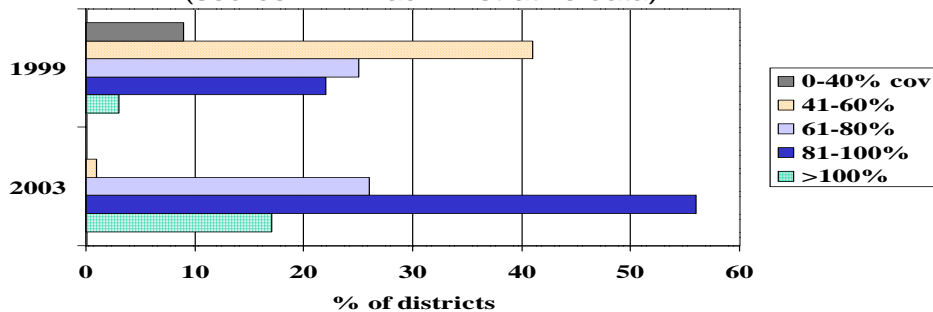
**DTP1-measles, 2003**



**Median = 21%**

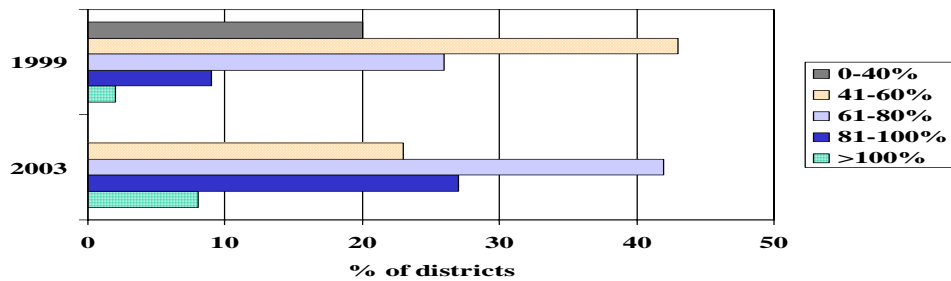
One of GAVI’s goals is to “reach the unreached” by improving access. In order to ascertain whether immunization coverage is becoming more equitably distributed, a comparison between 1999 and 2003 was made with regard to percent of districts achieving a given range of coverage for DTP1, DTP3, and measles. (Percent, rather than number, of districts is used because the number of districts increased during this period.) The results suggest that there is substantial improvement in the percent of districts moving into higher ranges of coverage for all three antigens.

**% of Districts with *DTP1* Coverage in a Specified Range, 1999 and 2003**  
(source: KEPI administrative data)

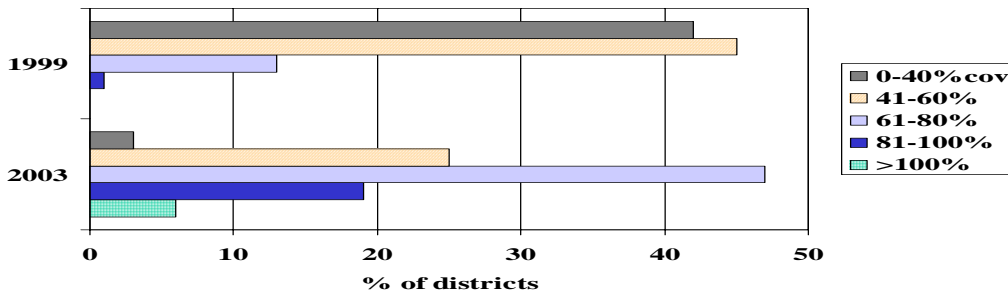




**% of Districts with *DTP3* Coverage in a Specified Range, 1999 and 2003**  
(source: KEPI administrative data)



**% of Districts with *Measles* Coverage in a Specified Range, 1999 and 2003**  
(source: KEPI administrative data)



For example, in 1999, 20% of districts had DTP3 coverage of 40% or less, whereas in 2003, 0% of districts were in that range. As another example, in 1999, 13% of districts had measles coverage in the 61-80% range whereas in 2003, 47% had attained coverage in that range. The percentage of districts showing coverage over 100% has also increased; these are almost entirely new districts that are within the Nairobi metropolitan area and where population estimates are difficult to make. Overall, the trend has been toward increasing numbers of districts with higher levels of coverage.

The ISS study team, as well as KEPI and its advisors, is well aware of the limitations of some of the data presented here. Wherever possible, attempts have been made to compare like data so as to minimize artificial differences. However, even within a single source of data there are probably some fluctuations, with the main one being an improvement in the completeness of reporting because of deliberate program efforts starting from late 2002. Even reporting on completeness is complicated. While figures

on the percent of district reports received at national level are clear, the figure on percent of facility reports received is complex because according to KEPI calculations, it is based on the number of immunizing facilities in a given month (that is, facilities that provided any vaccinations in that month). For Nakuru district during 2003 this figure fluctuated from 159 to 169, even though the DHMT estimated that there are as many as 174 who are able to provide vaccinations.

The results of the second DQA in August-September 2002 were taken very seriously by KEPI and local WHO and UNICEF advisors, who realized the implications--that Kenya would not be awarded reward shares. The findings of the DQA served as the basis for developing new tools for district and facility level promoting data management and use. The tools include the “Performance Management Handbook – A Toolkit for Health Facility Managers”, with an emphasis on performance management, monitoring, and planning for reaching every child. The key principles of the Reaching Every District approach are embodied in this manual. Additionally, the Immunization Monitoring Chart has been introduced; this is a wall chart for facilities for tracking progress toward objectives as well as pentavalent 1-3 drop out rates. KEPI, together with WHO and UNICEF local staff, provided training in the use of these tools to all districts in late 2003 through early 2004.

The study team also found that different data are available from different versions of the JRFs. JRF data on country profiles available on the WHO/UNICEF website do not present DTP1 data. JRF forms available in country do contain such information but are not necessarily accurate (for example, one JRF form obtained locally included a DTP3 “best official estimate” that was higher than the corresponding DTP1 figure.) This has made it difficult to make direct comparisons between administrative data from the government and JRF data from WHO/UNICEF.

## **7. Immunization financing**

### **7.1. Past, present and future financing**

Immunization Financing has been taken greater importance in Kenya since the development of the Financial Sustainability Plan submitted to GAVI in November 2002, and the subsequent developments with the failure of the Data Quality Audit in 2003. When asked about the major challenges facing immunizations in Kenya, most people questioned mentioned the tremendous financial need facing KEPI. While KEPI has made tremendous investments in training and data management over the last year, the funding for the implementation of these systems is far from secure.

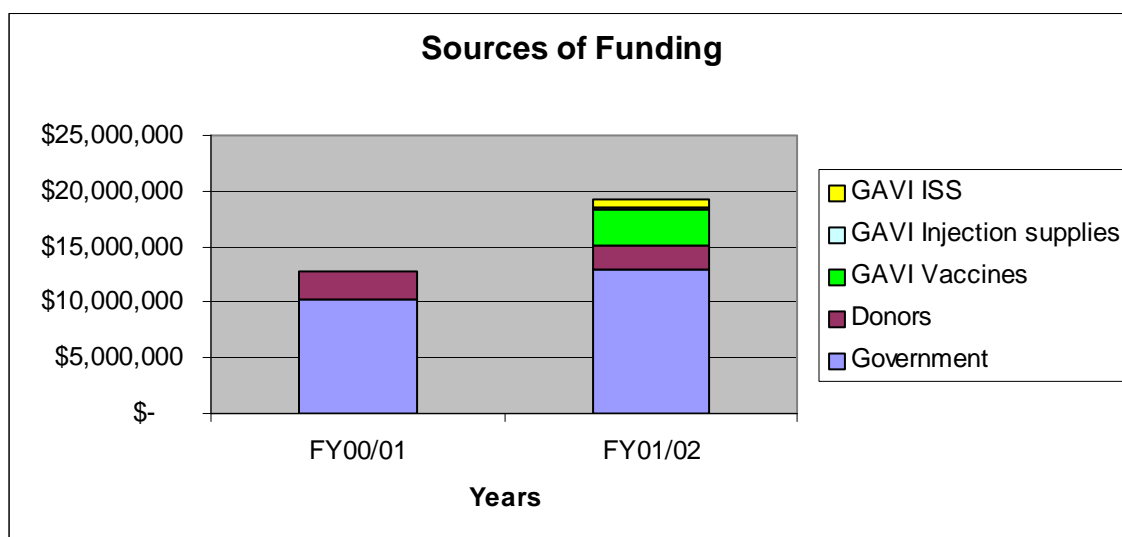
During the baseline year, the fiscal year prior to GAVI funding (2000), the routine immunization program cost \$12,834,853 including shared costs. Of this amount,

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\$10,289,142 (80%) was paid by the Government of Kenya, while only \$2,545,711 (20%) was paid by donors.

During the first year of GAVI funding (2001), the routine immunization program cost \$19,230,034 of which \$12,982,886 was paid by the Government of Kenya. While this represents a smaller relative share of the total immunization program cost, the Government of Kenya had actually increased its allocation to vaccines in real dollar terms from \$10,289,142 to \$12,982,886. The introduction of the pentavalent vaccine (DPT-Hepatitis B-Hib) contributed an additional \$3,248,684 in costs. Although donor funding decreased in 2001 from \$2,545,711 to \$2,048,003, this is primarily due to the withdrawal of DANIDA. This decrease in funding from DANIDA has not been specific to the immunization program, but more to the overall structural change that DANIDA is undertaking in all countries in the way that they are supporting development.

The bar graph below shows the evolution of funding sources from before GAVI to the first year of GAVI funding. It should be noted that the GOK actually increased its allocation to KEPI in FY01/02, even though there was a net decrease of funding from the traditional donors because of DANIDA.



GAVI ISS funding has been primarily targeted to districts for outreach and supportive supervision. These activities have been additive to the routine immunization program and the suspension of GAVI ISS funding will have detrimental effects at the district level. Kenya requested that the last tranche be received in two installments which means that districts will most likely receive their last installment of ISS funding in July 2004. Kenya is scheduled to conduct a third DQA in August 2004. A verification factor above 80% and an increase in the number of children vaccinated from baseline would result in another ISS payment in 2005.

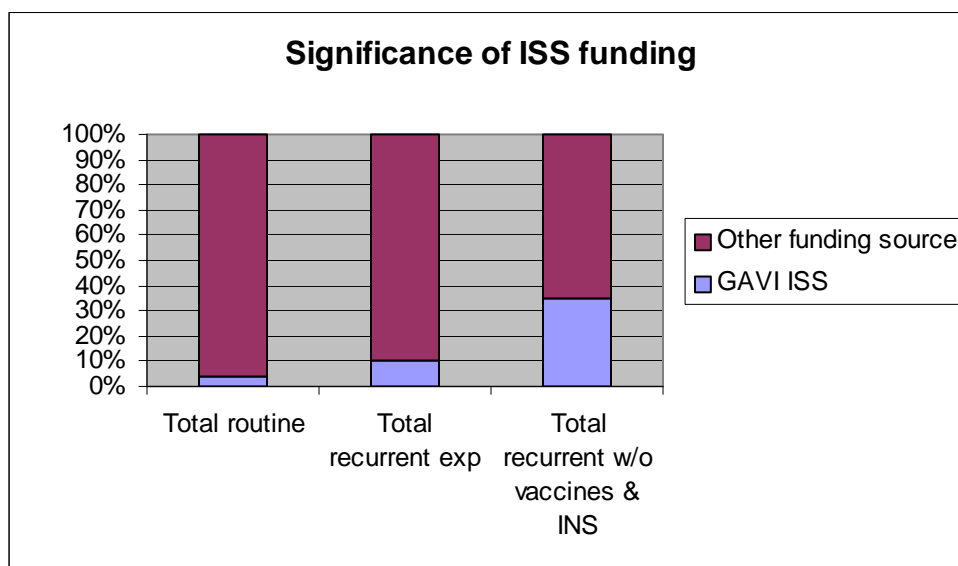
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Although GAVI ISS funding may appear to represent a small percentage of the total routine immunization costs, ISS funding actually has represented a very large percentage of immunization specific recurrent costs. This is significant because KEPI has been able to direct relatively large sums of money to the districts which had not previously been available to districts. District staff are able to get reimbursed for transport when picking up vaccines from the regional depots, and they are able to get paid for lunch allowances for outreaches. These small changes are acutely felt at the district level because of the rigid accounting procedures of GOK funding at the district level.

GAVI ISS funding represented 4% of total routine costs (including shared costs) for the first year of GAVI funding (FY01/02), but represented 11% of total recurrent expenditures. ISS funding was used entirely for immunization specific recurrent expenditures, and in fact, 53% of recurrent expenditures (excluding vaccines and injection supplies) were funded by ISS funds.

	Total routine	Total recurrent exp	Total recurrent w/o vaccines & INS
GAVI ISS	\$ 788,703	\$ 788,703	\$ 788,703
Other funding source	\$18,441,331	\$ 6,873,199	\$ 1,487,178
Significance of GAVI ISS	4%	11%	53%

If Kenya were to receive their reward shares in 2005 after passing the third DQA in August 2005, then the amount of the reward shares could cover much of the immunization specific recurrent expenditures. Approximately \$2 million would become available to Kenya.



Kenya has deliberately released smaller amounts of funding gradually to districts in order to avoid fund misuse, but also to pace the amount of funding entering the health system.

Kenya has also requested that payments be split into two. As a result, Kenya still has approximately \$580,000 of ISS funding that is unused. If Kenya maintains its current pipeline to districts, it will be able to maintain increased funding to districts through 2004 until the next reward payment, potentially in 2005.

## **7.2. Transactional costs**

When asked about potential transactional costs of GAVI for Kenya, respondents were quick to point out that the costs have been relatively minimal for what Kenya is receiving from GAVI. The Data Quality Audit and the Financial Sustainability Plan have both triggered changes within KEPI and have been appreciated by those interviewed. And while both of those processes take time and money, they have been viewed as valuable by Kenya. As for other costs such as setting up systems for GAVI and annual reporting, they are minimal especially when compared to the GFATM.

## **8. Experience to date with reward shares**

Kenya learned officially in December 2003 that GAVI would not be awarding reward shares, but informally, this had been realized by KEPI and local WHO and UNICEF offices following the September 2002 DQA. KEPI and technical partners have already taken a number of programmatic actions to improve both the quality and the reporting of data, with improvement of the verification factor as only one among several objectives. A third DQA is scheduled to take place in August/September 2004. KEPI plans to stage a mock DQA a few months prior in order to identify any weak areas that require targeted attention.

Most central level people interviewed expressed uncertainty as to whether Kenya would be disqualified from future reward shares because of the high baseline figures included in the 1999 application. As mentioned earlier, these led to high targets, in terms of total numbers of children to be immunized, and are thought to be unattainable (“we’ll always be chasing our tail,” said one person). All KEPI and local WHO and UNICEF staff expressed solid commitment to improving the quality of data and completeness of reporting and viewed them as important in and of themselves, but they wondered whether, even so, there was any chance that they could qualify for reward shares because of the problem with the targets that were set four years ago.

## **9. Comparison of GAVI with the Global Fund Against AIDS, Tuberculosis and Malaria (“Global Fund”) application process and implementation, and their effects on the health system**

The ISS study team met briefly with the MOH Focal Point for the Global Fund. He pointed out that GAVI and the Global Fund are similar in that they are both results-based funding mechanisms, there are significant differences between them. He described them as being the following:

- Level of detail required for reporting. Detailed quarterly reports must be submitted that give extensive information about activities and their implementation. Then, two years after the initial award, reporting on impact indicators is required.
- The Global Fund requires both financial and programmatic reporting, with a formal external audit required.
- The Global Fund entails planning with a great many more stakeholders, including NGOs, faith-based organizations, donors, representatives of civil society. As such, it is far more complex and time-consuming to manage.
- The Global Fund involves three programs, not one.
- Global Fund monies flow through the Treasury.

Financially, the primary distinction between GAVI and the GFATM has been the financing mechanism through which each must pass in order to arrive at the user level. GAVI funds bypass the Treasury and flow directly from the Ministry of Health to districts or provinces. GFATM funds are channeled into the Treasury before being released to the districts or whichever NGO recipient.

Funds for the GFATM were received in Kenya in June 2003, and no funds have been released from the Treasury yet. The government has been setting up systems to track this funding since June 2003, and therefore no funds have yet been released even though the funding was meant to be spent in 2 years.

There are no requirements at the district level on the ultimate use of GAVI ISS funds. Although districts receive guidance on how to use the funds and procedures on how to account for the funds, there are no conditions for receiving further funding from KEPI. The GFATM requires that each country have a principal recipient, most often a

professional accounting firm which is accountable for the money. The budget is approved by Parliament and funds are supposed to be audited.

The application process for the GFATM involves a broad stakeholder base from civil society to NGOs, government and the private sector. At the time of the application, indicators for disbursements of subsequent funding are established by the country and submitted to the GFATM. In this manner, the GFATM operates very differently from GAVI which imposes the DTP3 indicator as the condition for future reward shares.

Since GAVI funding bypasses the Treasury, GAVI does not have to fit into the country planning or budgeting cycle. On the contrary, many people interviewed cited the lack of integration into the country planning and budgeting cycle as an asset since funds by GAVI could be used continuously without regard to an end of a fiscal year. In addition, by bypassing the government rules for reconciling expenditures, GAVI funding flows to districts very quickly.

## 10. Discussion and Conclusions

### 10.1. Summary of main findings

From interviews at national, district, and facility level in Kenya, it is apparent that GAVI ISS funds are highly appreciated and are viewed as critical for implementing routine immunization at field level. At central level, ISS funds seemed to be viewed as part of a package of GAVI-related activities that include the DQAs, the introduction of pentavalent vaccine, and FSP development. By contrast, the disease-specific campaigns, both past and upcoming seemed to be viewed as somewhat separate.

Some of the main findings from this visit include the following:

The rationale for allocating ISS funds to different levels has been the subject of ongoing deliberations by the MOH and key ICC partners. This thinking has produced a sophisticated algorithm for allocating funds to districts, taking into account the target population, immediate past performance, the geographic size of the district and financial requirements for making supervision visits, and other factors. With each of the three tranches, the approach has been modified based on a review of the achievements and experience with the previous tranche.

The majority of ISS funds are distributed to the district level. KEPI, in consultation with the MOH Permanent Secretary and ICC members, has also provided guidelines to districts regarding how the funds should be used. These have become more specific and

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prescriptive with each successive tranche, such that the guidelines for the third tranche specifically instruct districts to use the funds for supervision visits.

The ISS funding has enabled field implementation of some system strengthening initiatives that were already under way. Similarly, the GAVI DQA in 2002 focused extra attention on deficiencies of data quality, completeness, and utilization that had previously been recognized but about which there had been little action. As one WHO advisor pointed out, achieving improvements in immunization performance requires having both the tools/strategies *as well as* the funds for implementing them. The ISS funds provide the means by which the system strengthening strategies can be put into practice at facility and district level.

Recognition of the performance-based aspect of ISS funding and the flexibility afforded by ISS funding was recognized more at national than at district level. Particularly because of results of the DQA and the declined reward shares, MOH, KEPI and other technical staff at national level had a firm understanding of the performance-based aspect. This was not explicitly recognized by the deputy DPHNs in the districts that were visited: although they readily described the ISS funds and knew they should be used for improving vaccination coverage and reaching more children, they did not know that the flow of future ISS funds was contingent on improved DTP3 performance and improved data quality. (And indeed, according to the KEPI guidelines, improved performance is just one of the criteria for allocating funds to districts.) This lack of familiarity with features of ISS funding does not, however, seem to be associated with inappropriate planning or use of ISS funds in the districts that the ISS study team visited.

The fact that ISS funds are managed separately by the MOH and are not part of Treasury funding was described by central and district officials as being critically important. Funds can be accessed easily at the district level, and they can be carried forward from year to year. In practical terms, this means that operational funds for immunization are available even when GOK funds are low, as at the end of the fiscal year. Within certain parameters, ISS funds can be used flexibly to address field needs which vary, to some extent, among the 77 districts.

KEPI has not established an accounting system for the ISS funds and does not actually require districts to provide receipts. As a result, KEPI does not have any detailed records of how the ISS funds were actually used in each district. In fact, KEPI lacks the manpower for accounting duties for monthly receipts from 77 districts; this would require additional hiring, probably using ISS funds. This lack of financial accountability seemed unfamiliar and a bit puzzling to the district personnel who generally expect such financial procedures. On the other hand, KEPI does require districts to submit a comprehensive monthly activity report for routine immunization, in addition to standard immunization data; this report covers about eight topic areas. KEPI reviews and provides periodic



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feedback to the districts based on these reports. Although there is no itemization of expenditures in these monthly reports as requested by KEPI, they do provide some information about how the ISS funds were likely to have been spent.

The introduction of pentavalent vaccine has led to many concerns and some positive developments. The ongoing supply problems at global level play out at field level in terms of interruption of services that limit coverage and protection for DTP and leads to emergencies when KEPI learns of stockouts and must quickly move vaccine from one district or regional depot to another. On the plus side, this situation has also heightened the awareness of vaccine management and triggered steps to improve it. While funding for pentavalent vaccine comes out of a different GAVI subaccount than ISS funding, in reality, the two are closely interlinked at field level. The future of pentavalent vaccine in Kenya is currently being questioned by the MOH, which lacks a compelling base of burden of disease evidence to justify a vaccine of this expense. The MOH does not believe that it can financially support pentavalent vaccine after the current term of Vaccine Fund support expires in 2005.

Future funding for immunization in Kenya is a concern that merits more attention—especially since Kenya was declined reward shares. The functioning of the ICC has dropped off in the past couple of years and ICC members urged that the ICC be revitalized with high level leadership from the MOH. With the passing of NIDs as a priority, the partner base has diminished and some promising opportunities for donor funding have not been pursued. While a participatory process was used to create both a financial sustainability plan (FSP) and accompanying workplan, no steps have been taken to operationalize them. However, WHO, UNICEF and the MOH have made innovative plans to develop a Kenya-specific GAVI – the Kenya Fund for Vaccines and Immunization—which will seek financial and material support from the private sector, professional societies, and others. Some concerns were raised in interviews that while such an initiative is commendable, both the level and nature of support that it could yield would be limited.

Impact of ISS funds on immunization performance is difficult to gauge. Attribution of changes in nationwide coverage to just a single and limited source of funding must be viewed with caution. Furthermore, different data sources yield different estimates of coverage in Kenya, with administrative data suggesting an upward trend but official estimates indicating a flatter trend. However, according to the data sources required by GAVI, the number of additional children immunized with DTP3 has increased since the baseline year of 1999. Similar improvements are visible for DTP1 and measles. While data on TT2+ coverage are difficult to interpret, the number of women immunized has also increased since 1999.

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The GAVI focus on DTP3 does not appear to have led to neglect of measles or DTP1 (of course, DTP3 is a function of DTP1). Moreover, between 1999 and 2003, DTP1-measles drop-out rates declined by almost a third while DTP1-3 drop out rates increased slightly. The extremely limited supply of pentavalent vaccine seems to have directly affected both DTP1 and DTP3 coverage and may have indirectly affected measles coverage. Trends for TT2+ seem to be independent of these patterns, suggesting that there is a different model for service provision and utilization for tetanus toxoid.

KEPI and its partners based their decisions for ISS fund allocations on careful consideration of issues that affect immunization at field level. Particular emphasis was placed on outreach, supervision, and improved collection and use of information, particularly so as to improve reporting and reduce drop out rates. Funding for this purpose has been accompanied by training and the introduction of tools to increase capacity for district and facility level management. These inputs seem to have yielded improvements in reporting but it cannot be said with certainty that they have led to increased performance in terms of children and women immunized. The detailed monthly reports from districts provide information on immunization activities as well as doses administered, vaccine stocks and wastage rates; but they do not monitor whether inputs (i.e., funding for supervision or outreach) have led to increased outputs (more supervision or outreach conducted) or whether such outputs correlate with increased numbers of children immunized.

KEPI views high drop-out rates as a serious issue, particularly in the districts in the western part of the country. The introduction of facility-level monitoring of drop-out should help raise the profile of the issue among health workers and the performance management handbook suggests ways of dealing with it. But based on experience elsewhere, as well as in Kenya itself several years ago, it is likely that more concerted effort will be needed to tackle the issue; facility-level monitoring may or may not lead to action. In interviews at national, district, and facility level, blame for drop-out rates was quickly placed on lack of pentavalent vaccine. While this may be true to some extent, it is important to understand the reasons for drop-out from the perspective of those who have dropped out. Focus group discussions with drop outs in Kenya (over 10 years ago) and elsewhere have indicated that unpleasant treatment by health workers was the primary cause of high drop out rates. Such a finding indicates that resolving the pentavalent vaccine supply issue alone will not be sufficient to reduce the problem.

### **10.2. Positive experiences and innovations**

Overall, GAVI seems to have provided an impetus to direct more attention to routine immunization in Kenya. GAVI has created events that require action and deliberation: the application process, the ISS fund allocation process, the two DQAs, the FSP, and the

introduction of pentavalent vaccine have all rallied attention for a subject that is, by name, routine.

The ISS funding and related GAVI activities have not happened in a vacuum. The disappointing DQA results stimulated action on problems that had long been recognized and for which some action had already been initiated. The provision of technical support from UNICEF and from two Kenya-based WHO EPI advisors augmented KEPI's own efforts and has helped ensure progress on developmental activities that might otherwise get lost in day-to-day management. Examples include the development of the performance management handbook and the vaccine management handbook.

At district level, the easy access to ISS funds, because of the separate accounts maintained by KEPI, has provided some relatively modest operational funds that make it possible for health personnel to act on the system strengthening initiatives. Some innovation was observed during the visit: in Nakuru district, the appointment of zonal coordinators tasked with supervision and data collection, was supported—in part—with ISS funds.

### **10.3. Challenges**

More time and funding of operational costs on a continual basis will be needed to achieve and maintain demonstrable improvements in coverage. The issue of funding from GAVI reward shares turns on two points: first, passing the upcoming DQA—an issue entirely in the hands of KEPI; and second, clarifying whether the initial mistakes in setting targets rule out the possibility of future ISS funding. The other critical issue concerns pentavalent vaccine: both its supply in the near term and Kenya's decision about whether to continue using it in the medium term. Directly or indirectly, this will affect the implementation of immunization in Kenya.

When interviewees were asked what feedback about ISS funds they would like to give to GAVI, two issues were identified. First, there was a strong desire to learn about other countries' experience with regard to allocation decisions, management of funds, and impact on performance. They suggested that this issue be added to the agenda of a regional meeting so as to allow for informal discussion among countries. Second, some interviewees asked that GAVI not curtail ISS funding prematurely—before the impact of systems now being put in place can be seen.

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### Annex 1

#### Schedule of Visit:

- 3/22 Document review at KEPI  
Meetings with Dr. Ali (logistician KEPI), Dr. Kamau (KEPI Manager), Mr Norr Ibrahim (KEPI Administrator), Mr Ademba (KEPI Data Manager)
- 3/23 Meetings with Dr. Misore (Director of Preventive and Promotive Services), Mr. Akame (Principal Accounts Controller), Dr. Otieno (Deputy Principal Accounts Controller)
- 3/24 Meetings with Dr. Kalu (WHO), Dr. Songa (WHO), Dr. Kenyanito (UNICEF)
- 3/25 Meetings with Mr Gachuhi (FSP Team Leader), Trisha Beddington (DfID), Marilyn McDonough (DfID), Ali Hassane (KEPI data)
- 3/26 District visit to Nakuru  
Meeting with DDPHN  
Visit to Health Center, interview nurse and matron
- 3/29 District visit to Thika  
Meeting with DDPHN and DMOH  
Visit to Health Center, interview nurses
- 3/30 Meetings with Dr. Nyambati (JICA), Dr. Mboya (MOH Head of Standards and Focal point for GFATM)
- 3/31 Feedback session with Dr. Kamau, Dr. Ali, Dr Songa.

## **Annex 2**

### **Contact List**

#### Ministry of Health and KEPI

Dr. Misore, Director of Preventive and Promotive Services

Dr. Tatu Kamau, KEPI Manager

Dr. Ali Avale, KEPI Deputy Director

Mr. Nor Ibrahim, KEPI Administrator

Mr. Ademba, KEPI Data Manager

Mr. Ali Hassan, KEPI Data Management Officer

Ms. Kirstin Melbry, CDC/STOP Team member assigned to KEPI

Mr. Akame, [NATASHA, ARE YOU SURE? I HAD HIS NAME AS KAKEME]

Principal Accounts Controller, MOH

Dr. Otieno, Deputy Principal Accounts Controller

Dr. Tom Mboya Okeyo, MOH Dept of Standards and Regulatory Services, GFATM  
focal point

Mr. G. M. Gachuhi, FSP Team Leader

#### WHO

Dr. A. Kalu, EPI Advisor

Dr. Songa, EPI Advisor for routine immunization

#### UNICEF

Dr. Alfred Kenyanito, Health Officer for immunization

#### DfID

Ms. Trisha Bebbington, DfID Deputy Head (Resources)

Ms. Marilyn McDonough, DfID Health Officer

#### JICA

Dr. William Nyambati, JICA Senior Programme Officer

#### CDC

Kirstin Melbry, temporary advisor to KEPI

#### Nakuru District

Mr. Joshua Komen, Deputy DPHN

Nurses at Njoro Health Center

#### Thika District

Dr. E.M. Maree, DMOH

Ms. Elizabeth Kariuki, Deputy DPHN

Nurses at Ruiru Health Center

### **Annex 3**

#### **Documents consulted**

KEPI/MOH Application to GAVI, June 2000

KEPI/MOH Progress Report for 2001

2002 GAVI Progress Report

Kenya Alliance for Vaccines and Immunization, Memorandum and Articles of Association, January 2004.

KEPI, Operational plan for accelerating routine immunization coverage in 2001 and introducing new vaccines into routine immunization, February 2001.

KEPI, GAVI ISS proposed disbursement of third tranche of GAVI support for accelerated routine immunization coverage August-October 2003.

KEPI, Guidelines for use of MOH/KEPI funds, January 2002.

KEPI, Strategic Plan 2001-2005

MOH, Financial management system for KEPI direct funds, draft March 2002.

WHO, Management of the Global Health Fund: Adapting the Kenya GAVI model, February 2002.

WHO/UNICEF Joint Reporting Forms for Immunization, 1999 through 2003

KEPI/WHO, Performance Management Handbook: Toolkit for Health Facility Managers, September 2003

KEPI/WHO, Vaccines Management Guidelines, Toolkit for Vaccines Store Managers, September 2003

KEPI administrative data for immunization, 1999 through 2003

KEPI - three large notebooks containing detailed records of all communication pertaining to GAVI since 2000

KEPI Files of monthly activity reports on accelerated immunization, submitted by 77 districts since 2003

**Annex 4 - Additional Children Immunized with DTP3, 1999 (baseline) to 2003**

	<b>1999 Children Vacc'd</b>	<b>Difference*</b>	<b>2000 Children Vacc'd</b>	<b>Difference*</b>	<b>2001 Children Vacc'd</b>	<b>Difference*</b>	<b>2002 Children Vacc'd</b>	<b>Difference*</b>	<b>2003 Children Vacc'd</b>
Targets in Original GAVI Proposal, 6/00	825,592	474,000	1,300,000	39,000	1,339,000	40,000	1,379,000	84,161	1,463,000
Targets in Revised GAVI Proposal, 8/00	825,592	61,394	886,986	67,517	954,503	98,857	1,053,362	103,931	1,157,293
Actual from KEPI admin. data	508,566	111,147	619,715	132,275	751,990	38,657	790,647	99,200	889,847

\* "Difference" = additional children immunized from one year to the next

GAVI Award letter of 20/9/00 cites 1999 baseline of 825,592 and 2001 target of 954,502 = **128,910 additional children to be immunized with DTP3**

KEPI administrative data cite 1999 baseline of 508,566 and 2001 figures of 751,990 = **243,424 additional children actually immunized with DTP3**

For 1999-2003, projected additional children to be vaccinated, per revised proposal is 331,701. Actual is 381,281.

**Annex 5**

**Organizational Structure of the Kenya Expanded Programme on Immunisation, Ministry of Health, Kenya**

