

Evaluation of GAVI Immunization Services Support Funding Case Study: Madagascar

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

Natasha Hsi of Abt Associates and Mary Taylor of AED visited Madagascar April 2-14 and April 2-9, 2004 respectively. Hsi and Taylor conducted interviews at the national level with the Service de Vaccination (SDV), ICC members, Ministry of Health and Ministry of Finance officials. Three districts were visited: Toliary I, Toliary II and Avadrano. Toliary I (rural district) and II (semi-urban district) were selected because they are part of Toliary Province which has historically been the lowest performing province and has received a large portion of the GAVI ISS funds and other donor funding. Subsequent to the initial two district visits and due to the lack of understanding of GAVI money at the district level, Hsi and Taylor chose Avadrano district which is located in Antananarivo province to ascertain the understanding of GAVI money in a well funded, well performing district.

1.1. Methodological Issues

There were several important limitations to this case study including the length of the field visit and competing demands on informant time, the availability and quality of coverage data, and variation in understanding of recent rewards shares decisions made by GAVI.

1.2. Time

The short duration of the trip was imposed by the need to prioritize Madagascar's planning for this year's measles campaign, the emergency response to cyclones, and the original deadline for the combined ISS report of May 30. Compared with other case study countries, the trip to Madagascar was particularly short and it was carried out before detailed common guidance was prepared on the basis of experience in Kenya for the other teams. This contributed to limitations in four areas: appointments with key informants; ability to obtain, reconcile, and analyze both qualitative and quantitative data; understanding of experiences prior to 2002; and comparability of experiences across countries.

1.2.1. Appointments

The time with the Head of the SDV was limited as the requirements for measles campaign work and other MOH activities was very high. In addition, key individuals responsible for SDV information systems were out of the country at a regional data quality workshop. Time was similarly limited with the WHO health and the USAID child health advisors because of World Health Day and concurrent validation of other important Maternal and Child Health policies. It should be noted that although the key technical staff for immunization were extraordinarily busy, they did make time available often at personal expense. Nearly all higher level officials represented on the senior level of the ICC, including the Director General, participated in the study and provided complete interviews.

Certain appointments could not be made at all, particularly to explore the functioning of GFATM. The focal point is the Minister of Health and the lead HIV/AIDS person could not be reached by

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the Head of SDV or the Direction Générale de la Santé Familiale et de la Lutte contre les Maladies (DGSFLM).

1.2.2. Ability to obtain, reconcile, and analyze both qualitative and quantitative data

At the start of the country visit, the SDV provided print copies of annual coverage data for districts, provinces, and the country. Electronic data were not available at this time, nor were monthly data by antigen and dose. With SDV information systems staff out of the country, it was not possible to obtain electronic files from SDV computers. By the last day of the visit, the SSEGIS (Health Information Systems) was able to provide electronic files by district aggregated in separate files by province for BCG, DTP3, Measles and TT2+. DTP1 was not available by month by district, although files with annual dropout rates were able to be analyzed. These data appear to be somewhat different than the print copies provided and analysis especially by categories of coverage was rendered extremely time consuming because of the file structures.

There were also somewhat different versions of JRFs provided by the SDV, WHO websites, and regional WHO informants. This lack of concurrence was commented on during interviews with no clear explanation of why the situation exists. It is still not clear what changes were made by whom and at what levels during the process of finalizing the official versions.

1.2.3. Understanding of experience prior to 2002

Very few of those interviewed were in their present positions during development of the GAVI application, when ISS funds were first received, and during the first year of their use. With limited institutional memory and a political crisis and change of government since then, it was difficult to get a clear picture of what actually happened. Interview data from the two recent years is more complete and includes several points of view. This may skew conclusions toward the present or may understate the importance of early communications.

1.3. Quantitative Data

The lack of availability of data consistent across sources in Madagascar has been noted above. In addition, there is some question about the quality of the routine administrative data provided. For two years (2000, 2002), district reporting was not complete because of strikes in 2001 which affected 2000 and 2001 data, and the political crisis in 2002 which affected 2001 and 2002 data. In some cases, less than half of annual reports were received. Some respondents indicated that services were provided and reports were completed but were never sent properly into the center. In other cases, respondents indicated that services were disrupted especially when travel or residing in some areas was dangerous. Since there was insufficient time to reconcile data by source and reporting system, and because it was not possible to determine what adjustments or assumptions had been made by the SDV data person, the SSEGIS data were used for the analyses in this case study. It is generally believed that routine administrative data are overestimates of actual coverage. It is possible that there are differences in quality of data between provinces both because of adequacy of reporting (more remote provinces may be less complete), and because of differential investments in data use (USAID supported provinces received information system

strengthening.) However, this will primarily affect the categorization of districts into coverage and dropout groups. Hopefully, the boundaries of these groups have been set broadly enough to minimize this bias.

1.4. Reward Shares Communications

At the time this study was conducted, there was great variation among ICC members in understanding of recent rewards shares decisions. During the course of several interviews, it became apparent that some were learning for the first time that reward shares will not be forthcoming until both the Data Quality Audit (DQA) is passed and DTP3 performance is increased. This had a significant effect on ensuing discussions and the team found itself explaining the GAVI ISS performance-based aspect for the first time to all ICC members but one. This is a particularly striking finding in Madagascar because it indicates that there were no actions taken by the country to maximize the ISS rewards and there was little knowledge about the consequences of the failure of the DQA.

2. Context

2.1. Country Context

Madagascar is an island nation of 16.9 million people with a GDP per capita of \$840¹; it is divided into 111 districts. The country is characterized by diverse ecological zones that vary by altitude and rainfall, some with difficult or intermittent access by road. Approximately 78% of the population lives in rural areas. The under 5 mortality rate is 149 and the infant mortality rate is 92 per 1000 live births, with pneumonia, fevers (malaria), diarrhea, and underlying malnutrition as the leading causes of child mortality and morbidity. However, national statistics mask important regional variation in health status and accessibility of health services. In general, Fianarantsoa and Antananarivo Provinces, with approximately half the country's population, perform well, while Toliary and Mahajanga Provinces do not.

During the time of application for GAVI funds and prior to the end of 2001, Madagascar was fairly stable, though poor. From October 2001 until April 2002, the country underwent elections, followed by a severe political crisis. The country was virtually paralyzed and the capital (Antananarivo) was effectively cut off from the other provinces. The government did not have functional budgets, there were frequent shortages of gasoline and other oil products, and roads were blocked or unsafe. In May 2002, there were cyclones resulting in a flooding emergency in one region. Donor funds and activities were minimized or postponed, and some were redirected into emergency efforts to meet immediate needs rather than for longer term systems building. The economy suffered considerable shrinkage and social and health services were disrupted. It was also reported that the general availability of donor funds to Madagascar decreased in the same time period as wars in Iraq and Afghanistan shifted their priorities. Since the end of the political crisis, the country has worked to rebuild its infrastructure and logistical capabilities, but

¹ WHO. Vaccine and Biologicals Global 2003 Global Summary Country Profile.

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some respondents observed that it had not begun to regain ground in routine programs until the last several months of 2003.

2.2. Health system context

Madagascar's health system is illustrated in Annex 3. The Service de Vaccination is a section within the department of child health under the directorate of family health. Primary health care services are integrated and provided by basic health centers (centres de santé de base or CSBs) located in communes. Services and support for those services are integrated in the sense that health workers are multi-purpose and provide a core set of maternal and child health services (IMCI including ALRI, diarrhea, and malaria, nutrition, vaccination, and antenatal/delivery/postnatal care.) Integrated supervision is carried out by technical staff and monitoring data is reported to statistical staff at the district level.

Madagascar is in the process of carrying out efforts to increase regional autonomy and decentralize functions such as planning, budgeting, and improvement to the district level. In 2004, for the first time, communities and CSBs are being engaged in a bottom up planning process with the support of CRESAN II (World Bank funded project). These plans will be aggregated at the district and then provincial levels and finalized at the national level. Reviews are conducted every six months at which time revisions can be made. However, compared to other countries in Africa which have nearly ten years of experience, decentralization is at a relatively early stage of evolution.

More recently, the new government of Madagascar has begun to implement a more performance-based approach to management of personnel. Many of the leaders in key positions and their technical support staff within the MOH have been changed and expectations of results are high. This past year, all Médecin Inspecteurs (District Medical Officers) took examinations and district postings were allocated accordingly. The district medical officers with the highest score had their choice of district postings. As a result, there was a major reshuffling of staff at the district level. At the time of this study, most district medical officers were new to their districts.

2.3. Health Financing

Financing for health in Madagascar is divided between the recurrent budget and the investment budget. The investment budget encompasses all donor grants, projects and loans for each sector, except GAVI funds. GAVI commodities (vaccines and injection supplies) and cash are not declared under the investment budget as they do not pass through Ministry of Finance channels.

The Ministry of Finance allocates funds to each ministry which then in turn allocates Ministry of Health funds among divisions and to individual districts.

Table 1 Government Budget in FMG

	2000	2001	2002	2003	2004
Recurrent Budget	N/A	4,210 billion	N/A	6,564.9 billion	8,450.3 billion
Vaccination Program Budget	N/A	781.2 million	886 million	886 million	70 million **
Investment Budget	2,421 billion	2,990 billion	3,729 billion	2,545.6 billion	2,545.6 billion
Health Budget	262.8 billion	223.7 billion	299.4 billion	199.9 billion	215.4 billion

Note: this sum is very small because SDV personnel expenditures were not included in 2004.

Each district receives funding primarily from the Ministry of Health investment budget. Each district then also makes requests to UNICEF, and SDV for GAVI funds to be released to them.

2.4. Immunization Background

The immunization program is a high priority for the government as can be seen from extension of routine vaccination to most CSBs, by a series of successful NIDs carried out from 1997-1999, as well as the recently strengthened AFP surveillance system, and commitment to a major measles campaign this year. In 1999, a rapid review of program performance was carried out and resulted in the focusing of efforts to strengthen routine systems. The review showed wide disparities in coverage between low and high performing districts (DTP3 coverage ranging from 18 to 69% in 2001) and the UNICEF Mixed Indicator Cluster Survey in 2000 (MICS 2000) confirmed high drop-out rates (26% DTP1-DTP3).² The SDV embarked on a more focused program to increase access and demand for quality services, and to strengthen epidemiological surveillance. This included activities to strengthen the management capacity of provincial and district supervisors, to provide outreach services and social mobilization, particularly in USAID supported provinces, and to improve the cold chain.

In 2000, Madagascar was one of the first countries to be approved for GAVI funding allowing the introduction of quadravalent DTP-Hepatitis B vaccine and auto-disable syringes. With the appearance of vaccine related polio cases attributed to lapses in the routine vaccination program in December 2001, polio eradication activities were intensified including improved AFP surveillance and additional NIDs. In 2002, there were breakdowns and blockage of vaccine delivery and funds to districts and CSBs. Services were accordingly curtailed and the drops in coverage reported through administrative data were accentuated by lower demand caused by insecurity and difficulties of transportation. In 2003, the RED (Reach Every District) approach was introduced with promising early results, particularly for low-performing districts. Towards the end of 2004, there will be a nationwide measles campaign.

² MICS 2000

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2.4.1. Service de Vaccination (SDV)

The SDV is responsible for providing technical leadership, vaccines and other supplies, and resources for the immunization program. It is staffed by a director who has been in the post since 1999 and by several technical staff including experts in data management, cold chain, other logistics, supervision and reporting, and training. The central cold room is housed in the same location.

In six provinces, 111 districts, and approximately 3200 community health centers the SDV supports immunization services which are offered through an integrated primary health care system. At each level, staff plan, supervise, manage vaccine distribution, cold chain, and injection safety activities, and conduct monitoring and reporting of immunization data. Responsibility for immunization rests with Provincial Directors and the District medical officers in each district. They are supported by technical staff including immunization and cold chain supervisors. These staff provide training and supervisory support to CSB staff. Depending on the level of the CSB (level I and II) and actual staffing, immunization services may be provided by doctors, nurses, midwives, and/or aides sanitaires (health assistants). In some districts, community volunteers or mobilizers (animateurs) have been trained to mobilize families and children to come for vaccinations. Because of limitations in cold chain infrastructure and wastage rate control, most CSBs provide services only on scheduled days within the clinics. When funding is available, CSBs provide vaccinations through outreach clinics (stratégies avancées) when they are within five kilometers and mobile services (stratégies mobiles) when they are beyond five kilometers distant from the health center.

Trends in vaccination coverage strongly reflect the geographic and logistical challenges of delivering services and the political crisis of 2002. The data prior to GAVI funding and just after the first funds and vaccines were received are estimated from the MICS survey of 2000 and are therefore stable. During 2002 and the political crisis, WHO-UNICEF estimates for BCG, DTP3, and measles increased slightly although this may be due more to measurement methods than to real increases. In 2002, the proportion of newborns estimated to be covered through maternal vaccination decreases significantly. Early reporting of 2003 data from the JRF, shows increases for all antigens. These increases are thought to be a result of a return to normal operations post-crisis, and to new approaches such as RED. Reported coverage from administrative data is noted for comparison purposes. In general, administrative data estimates are higher across the board with the exception of 2002. As noted earlier, this may reflect differences in reporting and aggregation of data from 2002.

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Figure 1

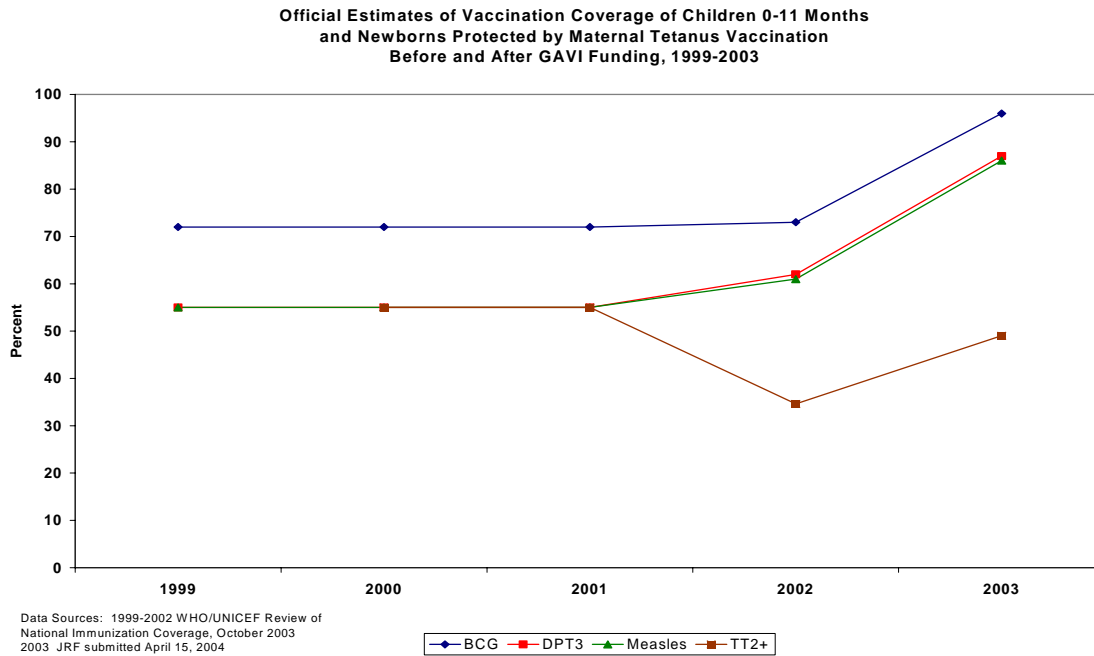
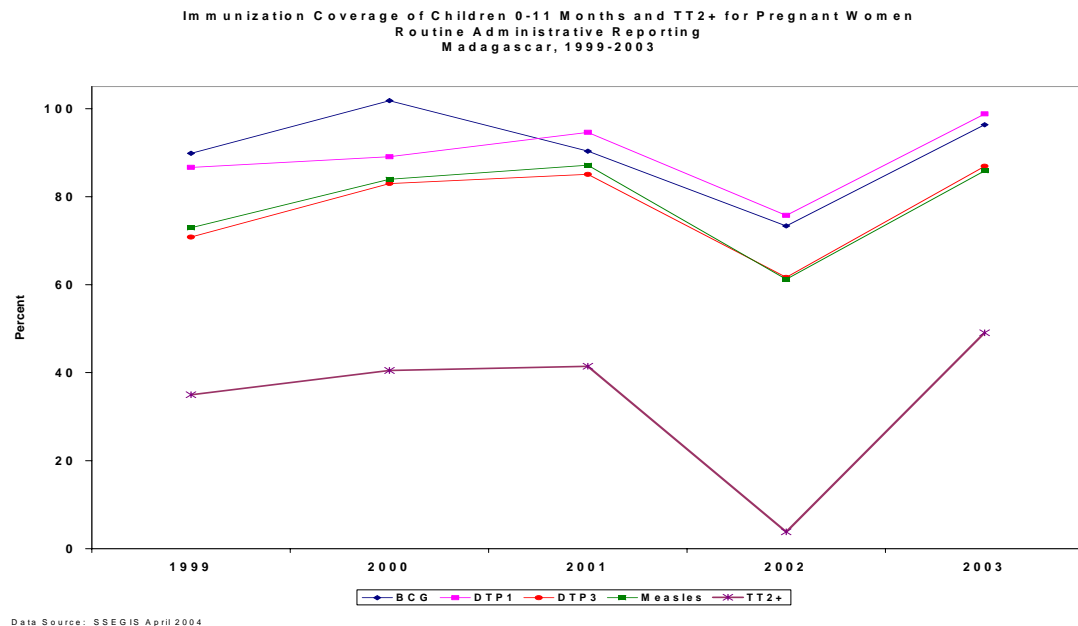


Figure 2



The challenges and obstacles to increased coverage at CSB, district, provincial and national levels have not changed substantially over the past five years, although there have been important improvements in cold chain infrastructure and use of auto-disable (AD) syringes, and in some districts, improvements in monitoring. As reported during interviews, these challenges include: lack of geographic and/or transportation access particularly in Toliary and Mahajanga; problems of supply and maintaining the cold chain given the lack of electricity and dependence on

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kerosene; frequent change of health staff which limits capacity building and establishment of community relationships; lack of supportive supervision related to insufficient funds and health worker skills; lack of effective communication between health workers and communities and patients, limiting understanding and utilization; and lack of use of data and critical analysis processes to identify and address the root causes of problems.

3. GAVI-Associated Developments

3.1. Application process

Madagascar was among the first round of countries to apply for ISS funding. The primary persons involved in the application process were UNICEF, WHO, USAID and SDV. In 2000, there was strong pressure from both the UNICEF and WHO representatives (both no longer in Madagascar) to include Madagascar in the first round of countries to receive GAVI funding. The country was approved for the ISS account in 2000 after some revisions of their coverage targets and also approved for DTP-Hepatitis B vaccine. The country was declined for the injection safety account in 2003 due to lack of comprehensive planning for injection safety in the Multi-Year Plan or any injection safety plan.

The GAVI application was prepared by an early technical working group of the ICC. Two or three individuals providing technical assistance through UNICEF and JSI (a USAID contractor), and working with the SDV wrote the application including the Multiyear Plan. It was then processed through the members of the ICC in 2000 for approval and signature (MOH, Institut Pasteur de Madagascar, WHO, Rotary International, UNICEF, USAID, JSI). Decisions to apply for new vaccines (quadrivalent DTP-HB) were based on the estimated disease burden for hepatitis B. Since information on Hib disease was unavailable and there were concerns over long term financing for vaccines, pentavalent vaccine was not selected. The application for ISS funds identified several areas in need of strengthening based on results of the 1999 review including strengthening program management at all levels, strengthening the follow up and supervision system at all levels, launching a social mobilization campaign for routine EPI, and improving epidemiological surveillance.

It is not clear who understood the shares system and set the targets for DTP3 coverage at the time of the first application to GAVI. A review of the application and official WHO-UNICEF targets and achievements demonstrates the confusion. The original targets were based on growth rate estimations of 3% from the 1993 census and reflected live births rather than surviving infants. This was corrected to a 2.8% growth rate and surviving infants in the progress report to GAVI submitted in early 2003. At the same time, large differences exist in routine administrative data and those that have been estimated by WHO-UNICEF resulting in two very different estimations of increased (or decreased) numbers vaccinated with DTP3. In interviews, respondents in Madagascar were perplexed by where the WHO-UNICEF estimates had come from and frustrated by the lack of accuracy and completeness in the national health information system.

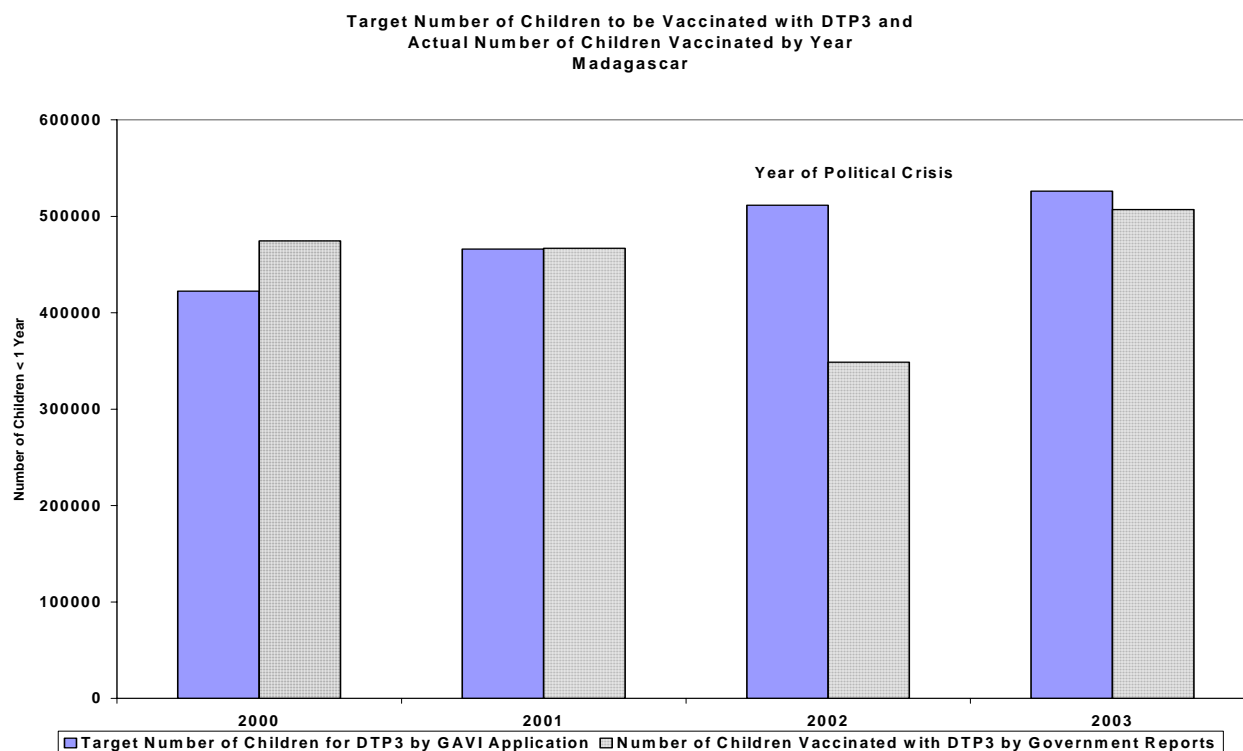
The GAVI Award letter of 18 September 2000 cites a 1999 baseline of 409,231 children vaccinated with DTP3 and a 2001 target of 455,916 which translates to 46,685 additional children

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to be immunized with DTP3 in 2001. Madagascar SDV administrative data cite 1999 baseline of 409,231 and with 466,767 children actually vaccinated in 2001 resulting in 57,576 additional children actually immunized with DTP3. However, using the 1999 baseline of 409,231 and the official WHO estimates for 2001, 79,023 less children were actually immunized with DTP3. In short, there is a large lack of confidence in either the targets and or reported coverage achievements detracting from their utility as incentives in a performance based system.

The following graph and table compares DTP3 targets as set in the GAVI application and achievements reported by WHO-UNICEF and the MOH. Leaving aside problems with data quality, the expectation was that the numbers vaccinated would continue to rise steadily each year. The promise of reward shares coupled with the usual objective to increase coverage (actually numbers of children vaccinated) was intended as an incentive for people within the system to work harder to achieve or exceed their coverage estimates. What happened is evident; in 2002 coverage and by extension, doses administered, was far less than earlier years and while increases have been achieved in 2003, they do not match the target that reflects an assumption of steady annual increase. The intervening cause – the political crisis – is so far removed from the control of MOH personnel or SDV leadership, it is difficult to imagine how performance-based incentives could have operated as intended.

Figure 3



Data Source: GAVI application, SSEGIS April 2004

GAVI money is perceived as being applicable more flexibly and quickly than funds from other donors. It was envisioned that GAVI ISS money could be used at the district level to fund activities that could not be funded through other donors, particularly travel and allowance costs to activate supervision. At the outset, decisions about spending were in the hands of the MOH and they arrived in Madagascar at a time when the SDV was seriously under funded. As the ICC expanded, and the political crisis deepened, GAVI ISS funds served to fill immediate funding gaps. These gaps were influenced by the need to divert routine system funds to emergency measures during the crisis, such as for the transport of vaccine to provinces and districts.

4. National level

4.1. ISS planning and allocation process.

4.1.1. The ICC

From 1999 to 2004, the ICC expanded its membership, subcommittees, and decision making structures. At the time of the initial application to GAVI, the ICC developed a Memorandum of Understanding which defined the objectives and priorities for strengthening of the immunization

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program, partners' roles and responsibilities, and decision making process for the ICC.³ The ICC was intended to be a collaborative partnership with MOH/SDV leadership. In addition to the initial six signatories, the ICC now has several additional members including JICA, Cooperation Francaise, EU, World Bank and the Futures/Policy Project. Decision making is done by the "ICC Senior" group which meets quarterly to review plans and interventions, resource allocations, and progress to date. Generally, technical committees and subcommittees meet monthly to prepare materials and then present reports and requests to the senior group. The main subcommittees include technical, logistics, and social mobilization or communications.

The key players on the ICC include the MOH (Family Health Division and SDV), UNICEF, WHO, USAID, JICA, JSI R&T/BASICS II, and the Institut Pasteur de Madagascar. The role of the World Bank has increased recently. The MOH provides oversight, sets and communicates policy, manages vaccine and equipment logistics and cold chain, guides implementation of services and surveillance, and manages the information system. Immunization is operationalized by the lower levels of the MOH especially the districts (SSDs) and the CSBs (health centers) UNICEF supports the national level and two low performing provinces by collaborating on routine EPI program priorities including RED and measles campaigns. They also duplicate and distribute communications materials. WHO provides technical support to implementing initiatives such as RED, and polio and measles campaigns, and monitors coverage and surveillance indicators. Until recently USAID provided funding and technical support through the Jereo Salama Isika project run by JSI and BASICS II, primarily in the provinces of Fiarantsarosa and Antananarivo. The Institut Pasteur de Madagascar is the reference laboratory for Madagascar and assists in AFP testing and surveillance and related training as part of polio eradication. The World Bank is engaged in expanding successful interventions such as those implemented by JSI with provinces and districts through the CRESAN II project. JICA has recently entered the immunization arena with funding and procurement of cold chain equipment.

ICC members tend to circumscribe their participation according to their mandate, assigned role and perception of leadership status for immunization in particular. Both WHO and UNICEF cite immunization as one of their highest priorities and are sometimes perceived as operating separately from the others. Content work happens at the subcommittee level, where effectiveness depends on individual participation and leadership. The quality of outputs of these committees and the level of collaboration and coordination among partners has varied over time. During development of the GAVI application, the technical group was most active while more recently the logistics group has guided major improvements in the cold chain. Several organizations assign the same person to all subcommittee activities and this effectively limits their participation because of lack of time.

Information and proposals are provided to the senior group for consideration. This process was reported to be less than ideal because materials are often provided just prior to or at the meeting where the decisions have to be made. Approvals may be given and documents signed even when products are not felt to be fully adequate (financial sustainability plan) because some progress has been made and there must be movement forward. However, respondents reported that the ICC

³ Republic of Madagascar. MOU for the Support to the Expanded Program of Immunization in Madagascar. March 2000.

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has improved over time, and that GAVI funds provided opportunities for them to make joint decisions and work together.

4.1.2. Planning

There is widespread consensus among the ICC that there is a lack of strategic and results oriented short-term, medium-term and long-term planning in the SDV. Many plans exist but they are reactive - frequently changed to reflect the latest initiative for which resources may be available. It may be that the push for polio eradication and more recently measles campaigns has had the greatest effect on priorities and activities. These were both reported to have consumed large amounts of attention and resources during planning and implementation phases.

GAVI ISS funds have been seen as one funding mechanism to “boucher les trous” (close the holes), and are not seen as funding to catalyze new additional activities. Funds that have filled gaps have been important to meeting program objectives. For example, they were recently used to assess the national cold room which needs major work to prevent catastrophic loss of vaccine, and early on they were used to address rumors that might have slowed introduction of new vaccines. The GAVI application process and ISS funds have not specifically driven a clear vision or focus to achieve specific results.

4.1.3. Understanding of the shares system

Madagascar will not be receiving reward shares because it received a verification factor of 58% in the 2003 DQA and it did not increase the number of children vaccinated with DTP3 in 2002 according to WHO/UNICEF JRF estimates. The understanding of the performance based funding by government officials and ICC members is critical if GAVI funding is to resume in Madagascar in 2005.

All interviewees were asked about their understanding of the performance-based aspect of the ISS funds using a variety of prompts to assess their understanding of the time limited aspect of the funds, the conditions imposed by the ISS funding, namely a successful DQA and the increase in number of children vaccinated with DTP3. The lack of understanding among all levels of MOH officials of the performance-based system was remarkable, particularly in light of the consequences of not having passed the DQA.

Tore Godal, the Executive Secretary of GAVI, paid a visit to Madagascar in September 2003, and it is clear from minutes of the September 11, 2003 that he discussed that the DQA results were not satisfactory and that the investment shares which were to be disbursed in 2003 would be divided into two parts to be distributed in 2003 and 2004. This could explain why many ICC members did not fully understand that Madagascar had lost its reward shares for 2004. It is also possible that the formal nature of this particular meeting precluded critical discussion of the problems and consequences of the DQA. To date there has been a lack of guidance by the ICC and a lack of concrete steps taken by the country to address the weaknesses identified in the DQA. There is an inherent assumption by all levels that without political crises, Madagascar will pass the 2005 DQA and increase the numbers vaccinated with DTP3; in that case, shares will start to flow again.

4.1.4. Mechanism and rationale for distribution of funds

There was consensus among ICC members that the GAVI ISS funds should be targeted towards low-performing provinces, namely Toliary and Mahajanga. However, in reality, 100 out of 112 districts ended up receiving ISS funds from 2001 to 2003. This occurred because SDV decided to disburse ISS funds to whichever district requested the ISS funds. If a district outside of Toliary and Mahajanga requested ISS funds, SDV accepted their request and wired the ISS funds to their district accounts.

SDV decided to allocate ISS funds much the same way that UNICEF had previously allocated their funding to routine EPI. In fact, district level funds went into indemnities and fuel for supervisory visits, activities that had been funded by UNICEF until 1999. The process was for the districts to present a request to the SDV in the form of budgeted activities. The SDV would decide if those activities merited funding and then approve the request. Those districts that knew what to request and pursued it, normally got their funds. Those districts that either didn't know about the opportunity of GAVI money or did not pursue those funding requests with the SDV, did not receive any GAVI money.

4.1.5. Communication of ISS funds with districts

When SDV initially received the ISS funds, WHO, UNICEF, JSI, and SDV went out to provinces and districts to describe the new funding that would be available to them. Districts were told by SDV that GAVI funds could be requested using the same method as requests for UNICEF funds and that GAVI funds should be used for already planned activities in the annual workplan (plan de travail annuel or PTA) that could not be funded by the state or other donors. Unfortunately, following the 2002 political crisis, the district medical officers were all reshuffled and the lack of communication from one to the next resulted in fewer requests, especially from non-UNICEF districts. There has been little subsequent communication from SDV to districts to resensitize them on GAVI funds. The microplanning trainings for the 2004 measles campaign will be used as an opportunity to resensitize districts and provinces, however, since GAVI reward shares have been withheld, SDV intends to be much more prudent in what it chooses to fund at the district level.

4.1.6. Management of ISS funds

GAVI money is kept in a commercial bank account with the Head of SDV and the Director of Preventive Medicine as the co-signatories of the bank account. The Head of SDV transfers money directly into provincial or district EPI accounts that were originally set up by UNICEF.

Since districts were already used to the UNICEF model of reconciling expenditures for routine EPI expenditures, SDV used the same procedures. Districts produced activity reports and a detailed financial expenditure statement, along with original receipts and sent the entire package to SDV. This was verified at the district level and the SDV where the team was able to find the original receipts for activities funded by GAVI in a visited district (Avadrano). SDV will not issue new funding to districts that have not reconciled their expenditures. As a result, Madagascar has kept detailed accounting of how ISS funds were spent.

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Nevertheless, there has been no systematic record keeping of the cumulative amount of ISS funds that the SDV had disbursed to districts, to date. Records are entered in chronological order in an Excel spreadsheet with their intended use of funds. The spreadsheet can be sorted to understand how funds were allocated overall among wide categories such as social mobilization or supervision. However, there is no systematic way for the SDV to know how many external funds the district is receiving outside of ISS funds. SDV communicated to districts that the ISS funds were meant to cover costs that could not be covered by other donors. There are certain districts that are getting intensive support from projects and donors. However, SDV does not have a system to keep track of whether that any district had already gotten funding from another donor.

Although the ICC might have been a mechanism for systematically reviewing how each district was being funded by ISS money or other donor funds, ICC members do not review the allocation of ISS funds. They review the ISS expenditures after the allocations have already been made to districts and spent by districts. The ICC members stated that often, they are presented a list of expenditures without much information. Since the ICC members do not have to review the withdrawal of ISS funds or the transfer of ISS funds to districts and provinces, they don't feel that they really have a voice in how ISS funds get allocated in Madagascar. In order to increase transparency in decision-making, it was suggested by some ICC members that a problem analysis should be done by the ICC as a group and decisions on solving those problems should be taken by the ICC as a group as opposed to the current situation where SDV presents the ICC with some decisions that the ICC needs to sign off on. There was considerable uneasiness from some ICC members saying that they had been rubber stamping some documents without either fully understanding or supporting the decisions.

4.1.7. Utilization of ISS funds.

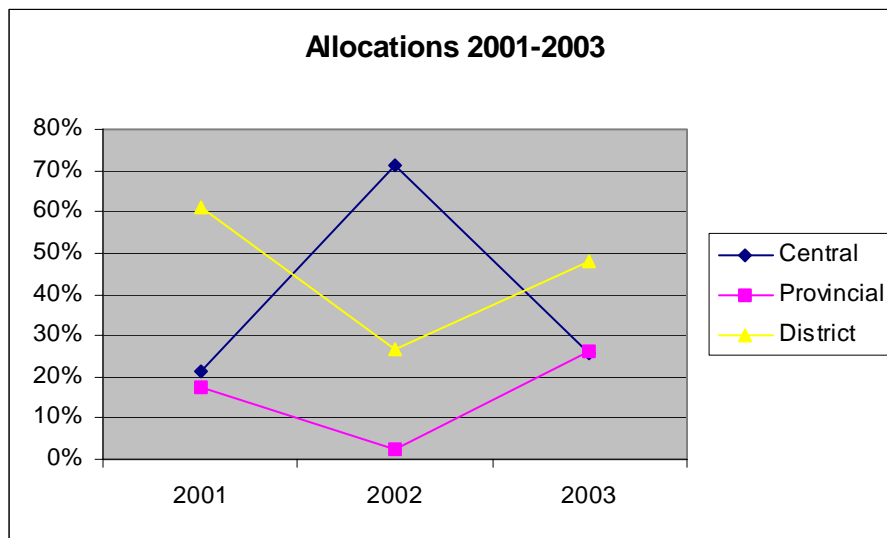
At the national level, ISS funds have been used for social mobilization, transport of vaccines and materials to districts, and periodic reviews of the EPI. The SDV utilized 21%, 71%, and 26% in 2001, 2002 and 2003 respectively of the ISS funds. The spike in 2002 is due to the use of ISS funds to transport vaccines and materials to districts during the 2002 political crisis. The flexibility of the ISS funding allowed SDV to quickly mobilize ISS funds to transport vaccines to districts in this time of need. Since SDV relies on districts to make their request for ISS funding, districts did not receive as much funding in 2002 as in 2001 or 2003 due to the political crisis and the lack of communication between SDV and the districts. The utilization of ISS funds in 2001 and 2003 are generally low because SDV will only disburse funds to districts if they request for ISS funds. In 2004, with the realization that Madagascar will not be receiving reward shares, SDV is making a conscious effort to extend the use of the ISS funds for as long as possible.

Table 2 Distribution of actual expenditures of ISS funds 2001-2003 in USD

	2001	2002	2003
Central	\$ 33,537	\$107,539	\$ 34,673
Provincial	\$ 27,122	\$ 3,575	\$ 35,107
District	\$ 96,082	\$ 40,128	\$ 64,830
Total	\$156,741	\$151,242	\$134,610

4

Figure 4 Changes in allocations to central, provincial and district levels 2001-2003



In 2002, approximately \$60,000 of the ISS funds were used for the 2002 polio campaigns. Again, the flexibility of ISS funds allowed SDV to mobilize ISS funds for unfunded activities at a time of need, even if that need does not pertain to achievement of ISS goals themselves. Some ISS funds were used to transport vaccines and materials for the polio campaign.

⁴ \$1 = 9,052 FMG

5. District level

5.1. Planning and allocation process

District visits were made to Toliary I, Toliary II in Toliary Province and Avadrano in Antananarivo Province. Avadrano was about 20 km from the capitol city, and the SSD offices and local CSB were all next to the district hospital. Data from Avadrano were unavailable on the day of the visit, but coverage rates on the graphs posted on the wall were clearly high for all antigens. Graphs and forms were present at the CSB level, and staff were skilled in explaining the information. Avadrano has been a JSI/USAID- supported district and had undergone extensive training, and information and supervision system strengthening. The cold chain was functional and record keeping was extensive.

By contrast, Toliary Province is more remote with greater logistical and cultural barriers to immunization. UNICEF is active in the area, CRESAN provides support to improve bottom up planning, and there are some NGOs which work with MOH partners to strengthen local services. The standard child health problems are evident (malaria, pneumonia, diarrhea, malnutrition, infectious diseases), although more remote, rural areas may have greater levels of malnutrition. Toliary I is an urban district with a population of approximately 170,000 people. There are 22 public health facilities (CSBs or dispensaries) each of which provides vaccinations on scheduled days. Problems for the immunization program include poor cold chain management, lack of demand by the population including certain insular cultural groups, lack of access for some CSBs which require walking long distances, and lack of supervision. Obstacles to improvement were reported to be a lack of resources, especially funds to carry out outreach sessions, problems with some types of kerosene refrigerators, shortages of fuel, and difficulty persuading the local population to come for all antigens during the first year of life.

Toliary II is a large, rural district of about 217,000 people with similar problems but extreme access challenges. Among 29 CSBs, the farthest is 390 km from the district center making supply of vaccine and equipment, as well as supervision difficult. Roads are seasonally blocked and lack of staff at post also limits service delivery. This district has an active District medical officer with data on both coverage and finances available centrally, and plans appear well matched to local needs. However, the same obstacles to improving immunization coverage exist and given what is needed to address transport and communication barriers, greater resources are probably needed.

Vaccination coverage for both districts is illustrated in the following graphs. Toliary I has had generally higher coverage than Toliary II, but experienced large declines during the political crisis of 2002. These declines have not yet been reversed to earlier levels. Toliary II has had very low coverage, although BCG has increased substantially. Measles and DTP3 remain well below 80%, making Toliary II a low performing district. Measles and DTP3 coverage graphs follow each other closely, perhaps indicating children being vaccinated in the latter part of their first

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year. Tetanus Toxoid coverage fluctuates in both districts. This may reflect actual differences in coverage of pregnant women or may reflect changes in how these data are reported.

Figure 5

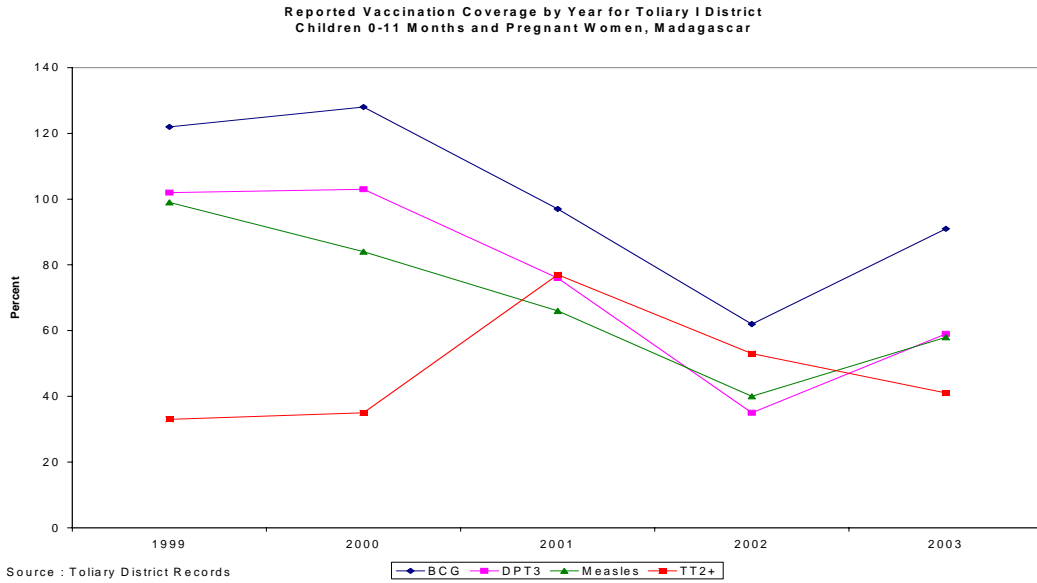
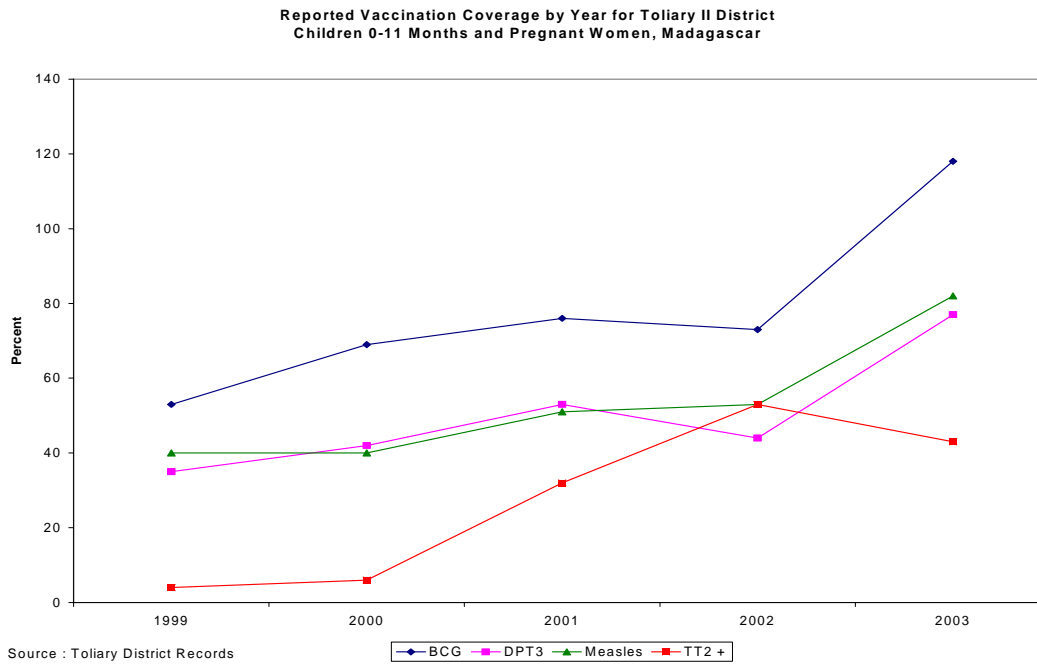


Figure 6



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5.1.1. Understanding of the GAVI funds

At the provincial (DPS), district (SSD) and health center (CSB) level in Toliary I and II, there was a lack of understanding of a performance-based system. This is surprising since Toliary province has been a major beneficiary of ISS funds. At the provincial level, the District medical officer of the DPS was knowledgeable about the existence of GAVI funds which could be used to fund immunization activities at the district level. He explained that he has been explaining the availability of GAVI funds since 2001.

The DPS did not know about the time-limited nature of the GAVI funds, was not informed about a Data Quality Audit or its results, did not know that subsequent funding was contingent on performance, and did not know that Madagascar would no longer be receiving money from GAVI for the time being. According to one ICC member, SDV never informed the peripheral levels (district and below) about a performance aspect of the GAVI funding or that the funding was only available for a limited time period because they never saw the rationale for informing the peripheral levels of these conditions. Nevertheless, UNICEF, WHO, and USAID did inform districts and provinces when they conducted visits to these levels. Our team was able to witness this in Avaradrano which has had support from both UNICEF and USAID. The Adjointe Technique (Deputy Administrator) in Avaradrano understood the various conditions of GAVI funding and referred specifically to a visit by the UNICEF representative to his district. Interestingly, this Deputy Administrator closely queried the inputs and achievements that would be necessary to regain these GAVI ISS funds.

5.1.2. Planning and allocation process of ISS funds

Originally, Toliary and Mahajanga, as the two lowest performing provinces, were supposed to receive most of the funding at district level. Therefore district visits to Toliary were planned to assess the impact of ISS funds at the district level. However subsequent to the Toliary visit and with the lack of understanding of any kind of performance based system or any knowledge of GAVI funds at the health center level, the next district chosen was Andravano in the Antananarivo Province. This district was chosen because it received ISS funds in 2003, was close to Antananarivo and therefore could easily receive communication from SDV and was a high performing district. The rationale was that if such a district with all factors in its favor did not know anything about the GAVI ISS funds, then no such understanding could have been expected in Toliary.

5.1.3. Management of ISS funds

Funding for health at the district level comes from the investment budget from the Ministry of Health. The District medical officer and the Adjointe Administrative (Deputy Administrator) are signatories on the account. Additional funding from user fees is kept in another bank account. Funding from GAVI transferred by SDV is kept in the district health bank account but different ledgers are maintained. The district medical officers were sensitized by the SDV on donor funding availability, and are well-aware that they need to collect the receipts and send them to SDV for verification.

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The districts were not aware of any performance-based aspect of the GAVI ISS funding. None of the districts visited had any knowledge of the Data Quality Audit or any data improvement initiatives.

5.1.4. Utilization of ISS funds

At the district level, funds were primarily used for social mobilization during the first year of GAVI ISS funding. This was due to rumors being spread in certain provinces that Madagascar was utilizing a new vaccine (Hepatitis B) that was not being given in France, and therefore people refused to accept this vaccine. Another portion of the funds in 2001 were used to conduct review meetings with districts on the relaunch of immunization activities, and increases in outreaches.

In 2002, many health centers closed down due to the political crisis and outreach was not conducted by most districts. The GAVI ISS money was used primarily to purchase petrol for the cold chain to ensure that the vaccines that were already out in the districts would not be spoiled. The flexibility of GAVI ISS funds allowed SDV to mobilize funds quickly to districts.

In 2003, districts started to conduct outreach sessions again, and a renewed emphasis on supervision was launched. Under the supervision category, SDV made a concerted effort of conducting cold chain supervision and using GAVI ISS funds to repair aging cold chain equipment and to do preventive maintenance. This was started in 2001 and continued in 2003.

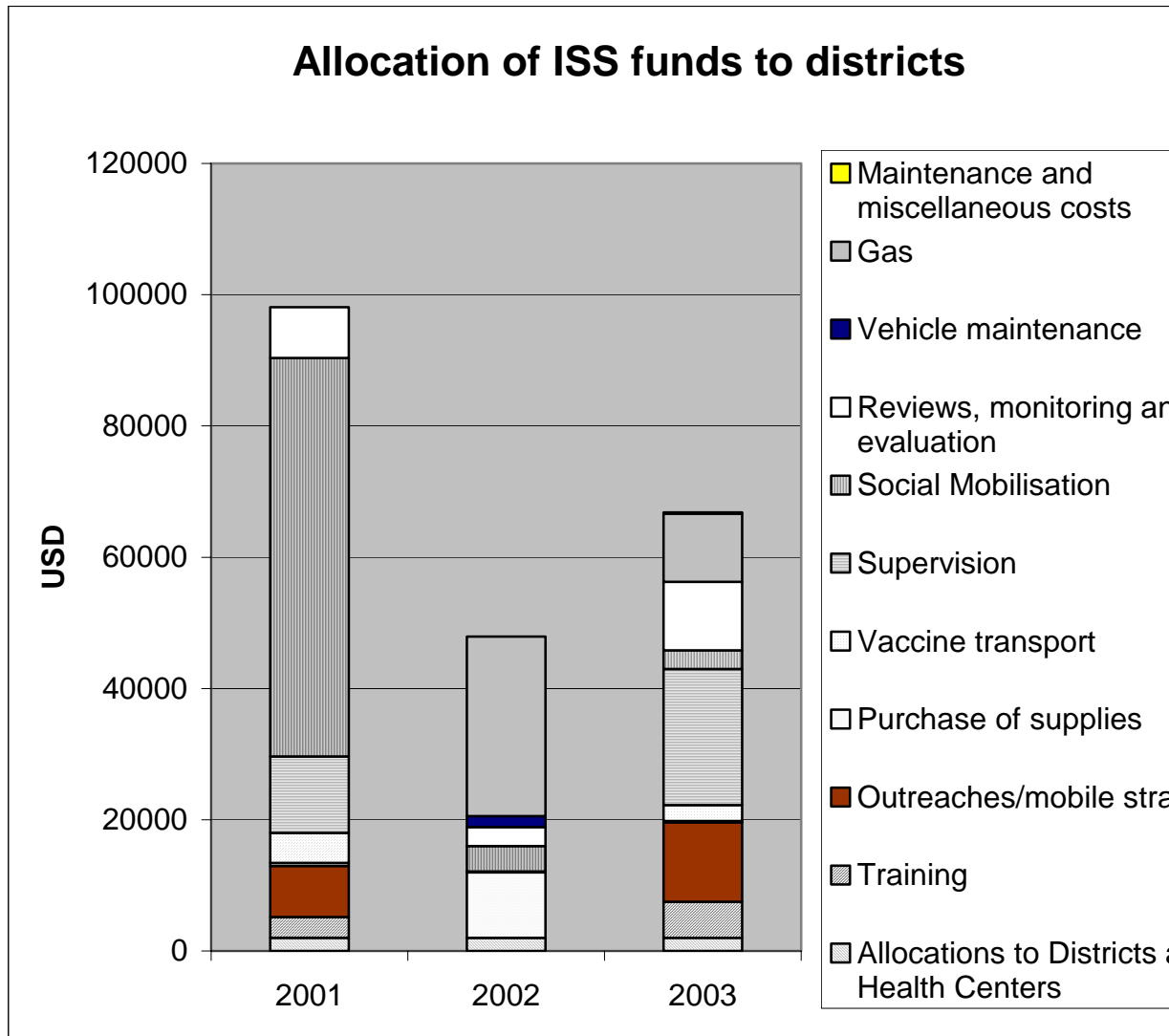
Table 3 Allocations of ISS funds to districts, 2001, 2002, 2003, in USD

Allocations to Districts and Health Centers	2001	2002	2003
Training	\$ 3,163	\$ -	\$ 5,489
Outreaches/mobile strategy	\$ 7,810	\$ -	\$ 12,079
Purchase of supplies	\$ 450	\$ 9,992	\$ 254
Vaccine transport	\$ 4,557	\$ -	\$ 2,387
Supervision	\$ 11,668	\$ 107	\$ 20,737
Social Mobilisation	\$ 60,710	\$ 3,867	\$ 2,868
Reviews, monitoring and evaluation	\$ 7,724	\$ 2,905	\$ 10,423
Vehicle maintenance	\$ -	\$ 1,673	\$ -
Gas	\$ -	\$ 27,342	\$ 10,399
Maintenance and miscellaneous costs	\$ -	\$ -	\$ 193
Total	\$ 96,082	\$ 45,887	\$ 64,830

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⁵ \$1=9,052FMG

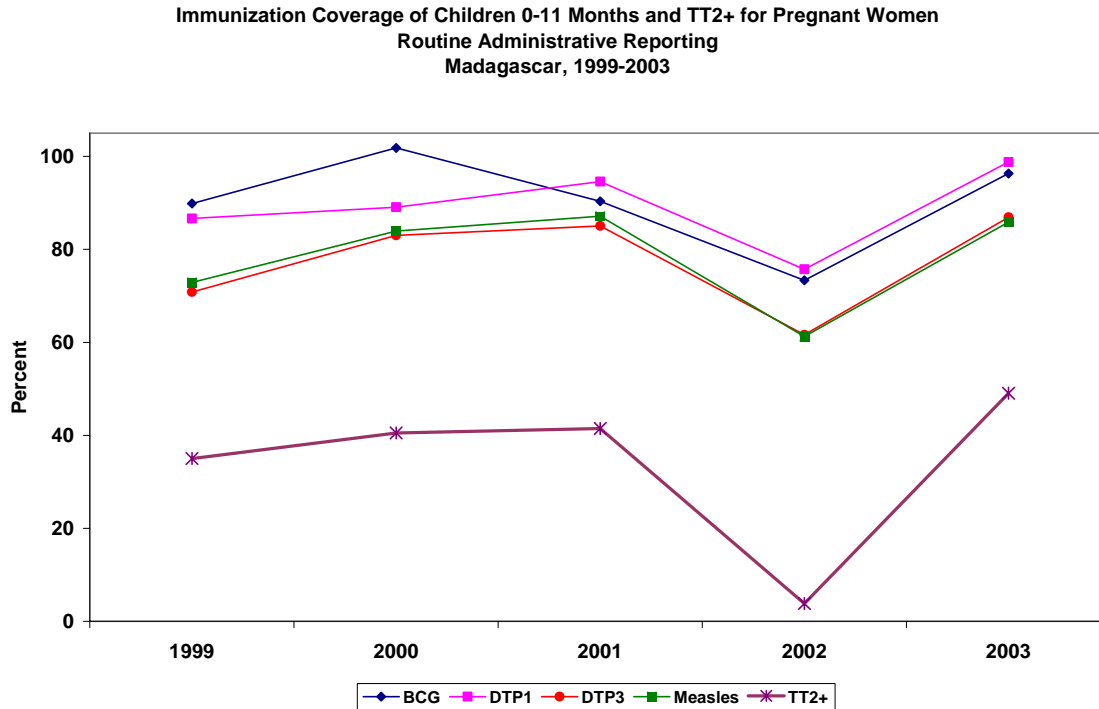
Figure 7



6. Changes in outcomes associated with use of ISS funds

Vaccination coverage as reported in the routine system shows small increases in the two years prior to and during the first year of GAVI ISS funding. During the first year of GAVI, funding was spent on social mobilization and introduction of the new DTP-HB vaccine. Despite rumors about the vaccine, coverage did not fall. In 2002, there were significant decreases attributed to the political crisis and associated problems of supply and demand. GAVI funds were spent to get vaccine into the countryside, and it is possible this contributed to less decrease than might otherwise have been experienced. In 2003, coverage slightly exceeded pre-crisis levels.

Figure 8



Reported coverage for BCG sometimes exceeds 100% at the national level and often exceeds it at the district level. This reflects the quality of denominator data which is dependent on projections with many assumptions and which fails to take into account migration and utilization of clinics outside assigned catchment areas. However, in high performing districts BCG and DTP1 coverage demonstrate good access to vaccination services. In low performing districts such as Toliary II, access for initial vaccinations is still a challenge.

Both DTP3 and measles follow the same coverage pattern over the years but about 15 to 20 percentage points lower than DTP1. Drop out has remained a problem but at stable levels over the years. Measles coverage was reported to be generally overestimated as a consequence of changes in reporting forms in the late 1990s that eliminated space for vaccinating children over one year. This was done as part of efforts to reduce high vaccine wastage and use rates but may have caused workers to note vaccinations given to all children regardless of age in the numerator (the policy is to vaccinate only children under one year). This would mean that DTP1-Measles drop out is actually higher than it appears to have been reported.

Coverage of pregnant women with TT2 and higher has remained low at similar levels for 1999-2001 and 2003. During the political crisis TT2+ coverage was extremely low. This may reflect reporting problems, lack of utilization of services for antenatal care during this time period and problems with local vaccine supply. It appears that during the emergency, emphasis in the program was on reaching children.

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A comparison of best estimate data from government and WHO-UNICEF sources shows that survey data estimates are generally lower than administrative coverage. In this case, WHO-UNICEF used the same survey (MICS 2000) data for three years so it is not useful to consider the trend. The fact that survey data is lower is a common finding in many countries and is referred to in several SDV reports to GAVI and other donors. It demonstrates ongoing problems with routine information systems.

Figure 9

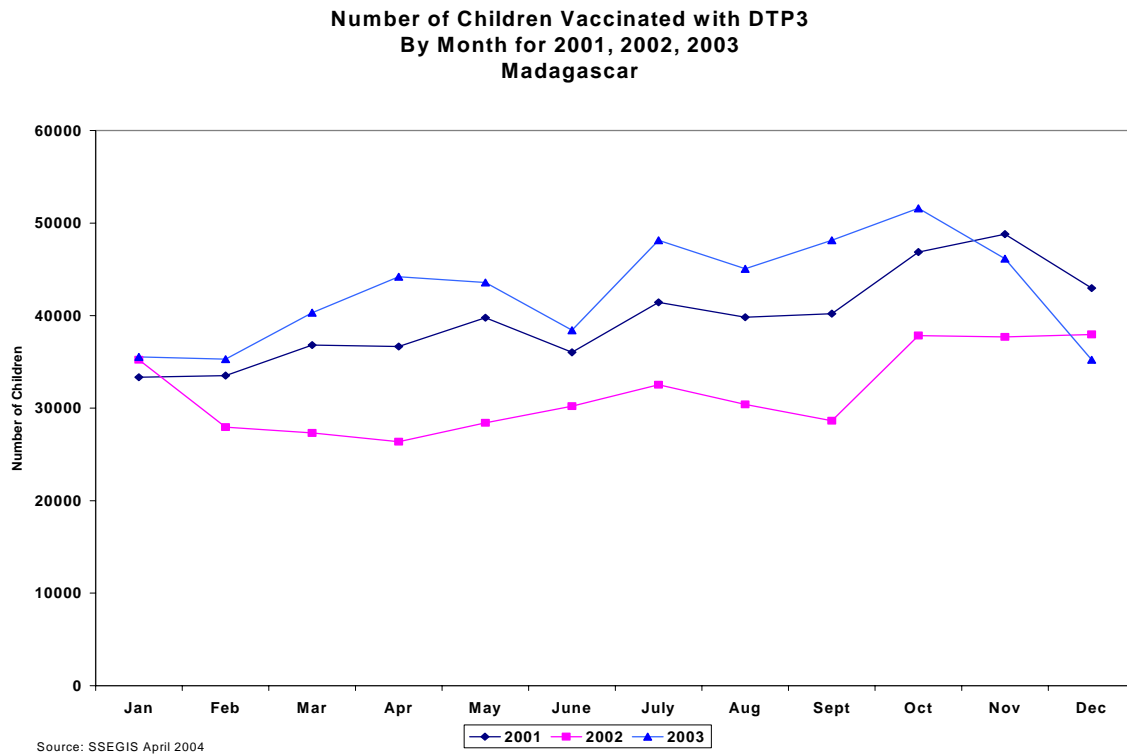
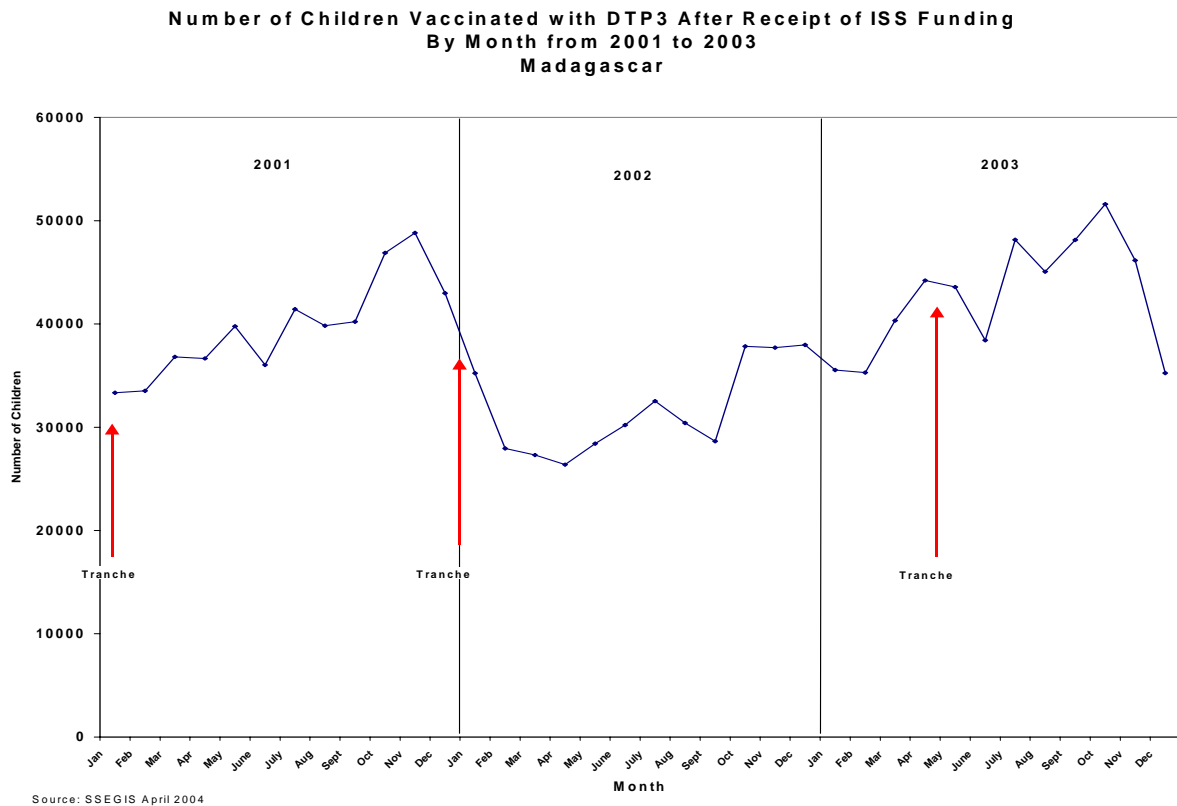


Figure 10



The number of children vaccinated each month with DTP3 after ISS funding began, along with the month the money was received is illustrated above. In years of normal operations (2001 and 2003), monthly coverage follows similar patterns over the course of a year. The numbers vaccinated is generally lower in Dec-Jan-Feb and peaks in Oct-Nov. This was reported to be consistent with farming and service delivery cycles. During the year 2002, the pattern still peaks in Oct-Nov but the whole line is lower. It is not possible to confirm a negative, but ISS funding may have helped to avoid even higher decreases. Most of the decrease has been attributed to reductions in outreach and some CSB activities. Using the timing of the receipt of funds at the national level may not be a useful comparison of availability of funds and numbers vaccinated since disbursement is likely to be more important. It was not possible to obtain information on timing of disbursements. It is probably necessary to look at the timing of the availability of funds and changes in coverage levels at the CSB level. This would contribute information to an assessment of the utility of outreach and supervision strategy investments.

A comparison of the proportion of districts by coverage level category for both DTP3 and measles in 1999 (prior to GAVI funding) and 2003 is shown in the graphs below.

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Figure 11

**Proportion of Districts with DTP3 Coverage in a Specified Category
Madagascar, 1999 and 2003**

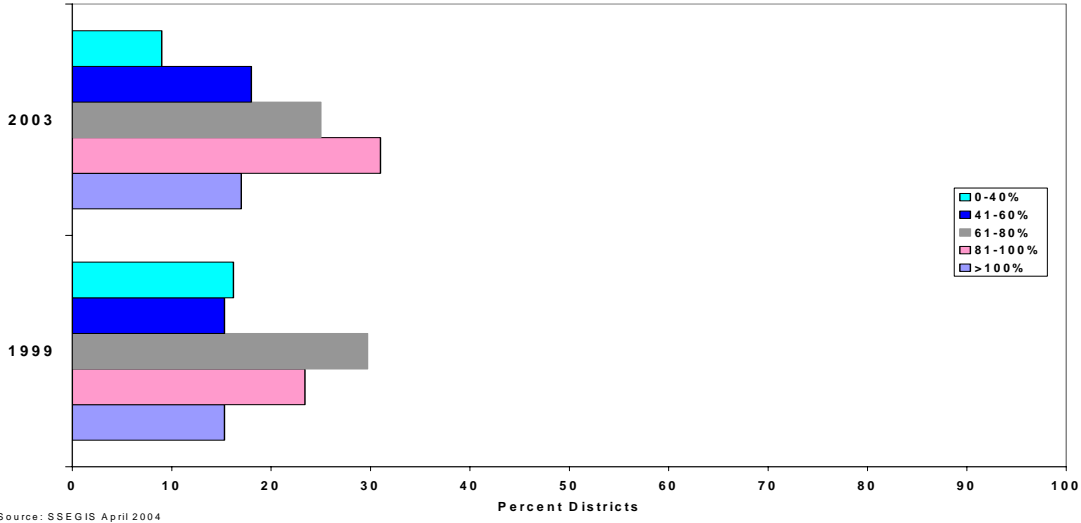
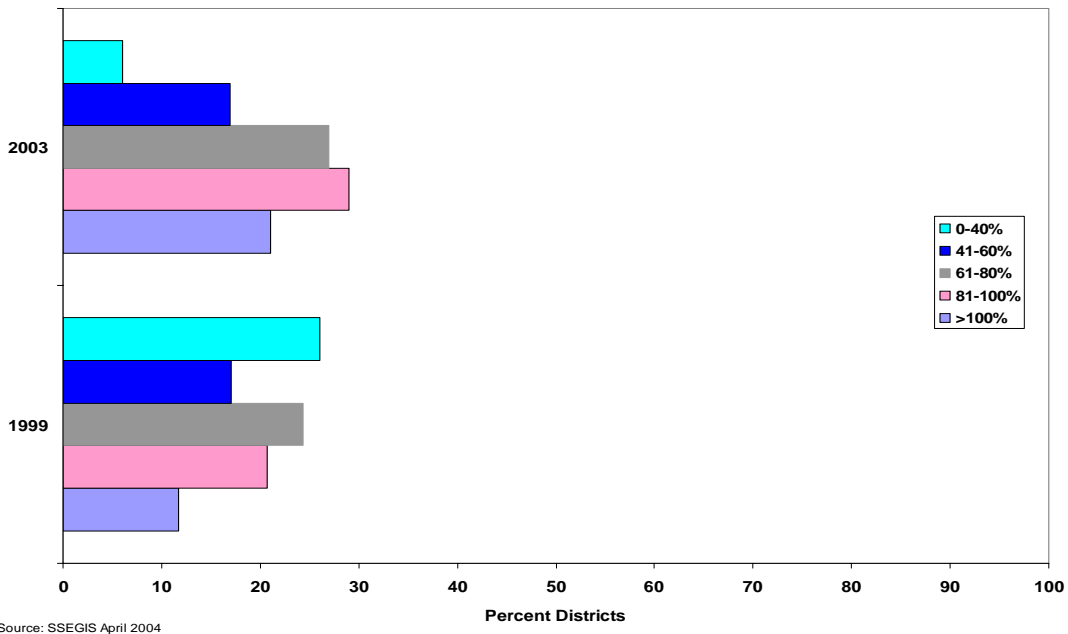


Figure 12

**Proportion of Districts with Measles Coverage in a Specified Category
Madagascar, 1999 and 2003**



First, there was an increase in the proportion of districts with basic access to services (decreasing the proportion in the 0-40% range and increasing the proportion in the 40-60% range) for both DTP3 and measles. Similarly there are increases at the 60 to 80% and 80-100% levels in 2003. Median coverage by district for DTP3 in 1999 and 2003 respectively, was 73% and 79%. Median coverage by district for measles in 1999 and 2003 respectively was 66% and 81%. While

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increases in median coverage for DTP3 were reported to be believable, the relatively larger increases in measles coverage were thought to include a reporting artifact from vaccinating children over one year. This is borne out by the reporting of maximum coverage figures well in excess of 100% in 2003.

The distribution of districts in the categories more closely approximates a normal distribution in 2003. This may mean that there was movement away from a pattern of district haves and have-nots, where those that were inaccessible had few services and those that were accessible had ongoing services. This suggests greater equity of coverage among districts and perhaps reflects the success of efforts to move vaccine and insist on services even in difficult to reach locations. This conclusion may be reinforced by early results from the RED approach that were being assessed at the time of this case study. Overall, the push for strategies that were to increase access and reduce dropout in the early 2000s cannot be specifically tied to the availability of ISS funds. Rather, they seem to be a result of technical strengthening of the SDV focused on district levels including approaches used by JSI/BASICS II, RED, and others.

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Figure 13

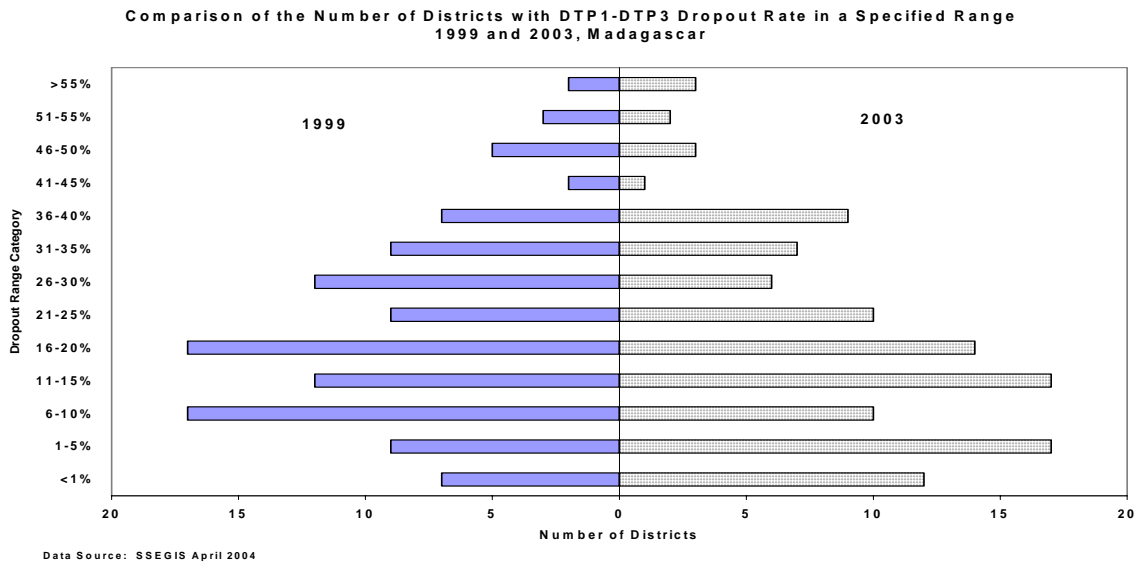
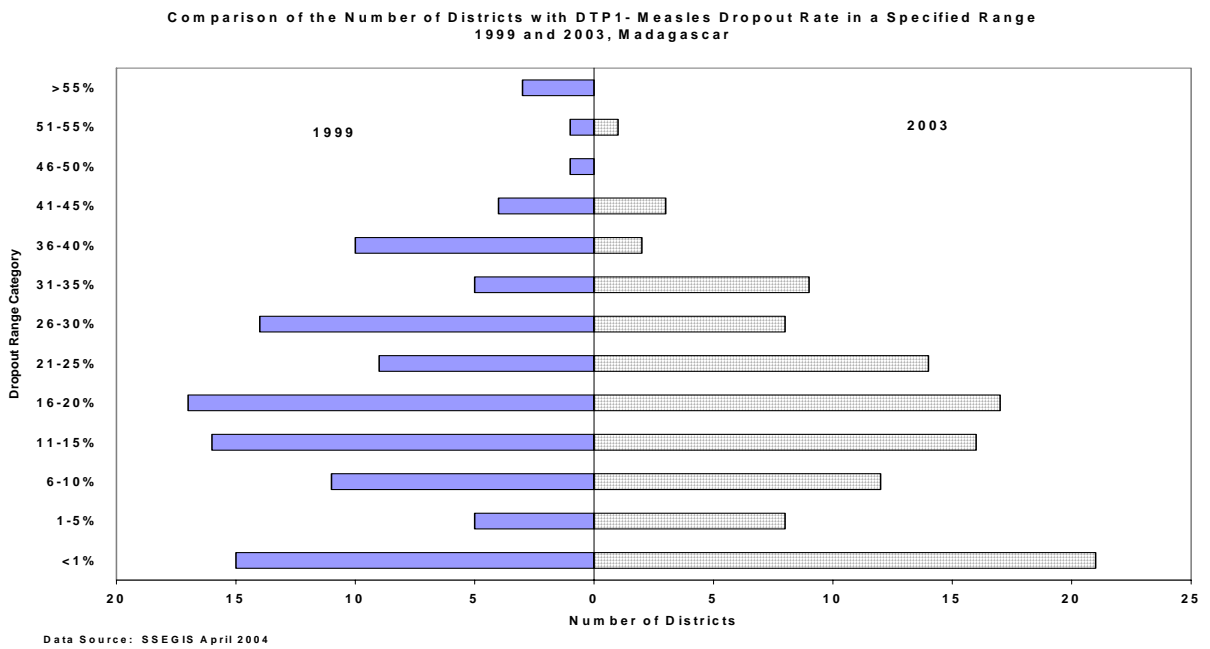


Figure 14



The distributions of drop out rates by category are illustrated for DTP1 to DTP3 and DTP 1 to measles for 1999 and 2003. The median dropout rates for DTP1 to DTP 3 for 1999 and 2003

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respectively were 18% and 15%. The median dropout rates for DTP1 to measles for 1999 and 2003 respectively were 18% and 14%. While this demonstrates some improvement in dropout rates for both DTP3 and measles, it is not a major shift. Also, while ISS funding performance incentives are tied to DTP3, there does not seem to be any additional focus on increasing DTP3 coverage at the expense of measles or other antigens.

In sum, vaccination coverage of children under one year for all antigens was increasing until the political crisis of 2002, at which time there were significant decreases due to disruptions in transportation, communication, resources, and security. In 2003, this trend was reversed and depending on the data used, either increases to pre-crisis levels or increases above 2002 levels. Respondents unanimously agreed that there were improvements in 2003. To truly document a trend it will be necessary to review 2004 and perhaps 2005 data. A list of number of children vaccinated with DTP3 disaggregated by district was not available, and it was not possible to obtain a list of districts that were funded by particular donors or NGOs. As a result, an analysis to assess whether ISS recipient districts increased more than non-recipient districts is not possible. Given this situation, any association between ISS funding and changes in outcomes is difficult to determine. The two ways that funding may have contributed to increased coverage beyond what might have been expected from regular operations is when it was used to address immediate and unpredicted barriers (transport of vaccine during the political crisis), and when it was used in low performing areas to increase outreach. In the former, it was the flexibility and timeliness of the funding that mattered, while in the latter it was providing funds for critical routine operations that were under funded by both donors and the government.

As described earlier, an understanding of the results of the DQA has not yet been built among key stakeholders in Madagascar. The DQA report was disseminated and was perceived to document problems with routine reporting. These problems were already known although the DQA provided more specific detail about the relationships between reporting at local, regional, and national levels. The purpose of the DQA is to provide a standard assessment of the quality of information systems for vaccination services. While recommendations cover a range of topics, the two most important measures that are used for GAVI decision making are the verification factor and the numbers of additional children vaccinated with DTP3. At the time of the case study, neither the verification factor nor its consequences were widely understood. It is not likely then, that the DQA or GAVI's performance-based expectations had any influence on plans or activities to improve the information system. During the short time of this study, it appeared that it was in the USAID supported districts that local staff were more fully engaged in aggregating, analyzing, and using data for improvement.

The scheduling of Madagascar's first DQA was difficult given the political crisis and the result was that data quality were audited for the year of the most severe disruptions, when reporting might be expected to be different and less effective. The results of the DQA in terms of verification were predictable yet they were not predicted. Neither were actions or communications taken to mitigate the likely results (by the ICC, the MOH or GAVI). This reinforces the finding that initial ISS funding and the performance based system did not contribute to information systems improvements, and suggests that the DQA and enforcement of its consequences by the GAVI Secretariat are now seen as providing that incentive.

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The SDV leadership is cognizant of the consequences of failing the DQA. The need to work on the CSB and district levels to improve the accuracy, reliability, completeness, and timing of reporting was expressed. This had been communicated to the provincial level at least in Toliary where the supervisor said he would now be demanding better record keeping and alignment between patient cards, tally sheets, and monthly reporting forms. This was in contrast to the district level where supervisory priorities were in areas concerning quality of services and to the central level where it was less clear what actions need to be taken.

7. Immunization financing

7.1. Impact of GAVI funding on overall funding for immunizations

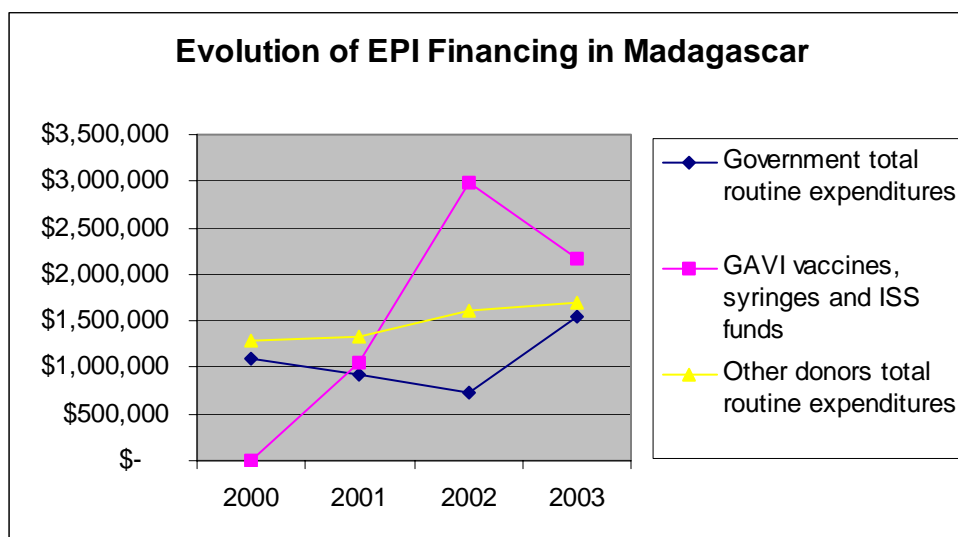
Madagascar began receiving GAVI support in 2001 in the form of GAVI ISS support, with full introduction of Hepatitis vaccine and AD syringes in 2002. Although government decreased its funding to immunization in 2002, everything in 2002 was in flux due to the political crisis. Donors have steadily increased their funding for routine immunizations, namely UNICEF. In effect, from 2000 (prior to GAVI funding) to 2003, funding for routine immunizations more than doubles with the government and donors both increasing their allocations to immunizations.

Table 4 Immunization expenditures 2000-2003 in USD

	2000	2001	2002	2003
Government recurrent expenditures	\$ 950,070	\$ 922,756	\$ 740,753	\$1,531,662
Government capital expenditures	\$ 150,948	\$ 8,756	\$ -	\$ 16,168
Government total routine expenditures	\$1,101,018	\$ 931,512	\$ 740,753	\$1,547,830
GAVI vaccines, syringes and ISS funds	\$ -	\$1,061,156	\$2,994,315	\$2,166,085
Other donors recurrent expenditures	\$ 819,397	\$1,231,238	\$1,389,168	\$1,490,394
Other donors capital expenditures	\$ 468,742	\$ 105,802	\$ 219,721	\$ 212,112
Other donors total routine expenditures	\$1,288,139	\$1,337,040	\$1,608,889	\$1,702,506
Total Routine	\$2,389,157	\$3,329,708	\$5,343,957	\$5,416,421

The bar graph below shows the evolution of financing of the SDV in Madagascar and the contributions of the various partners. The introduction of the DTP-HB vaccine and AD syringes are primarily responsible for the increase in costs from 2001 to 2002.

Figure 15



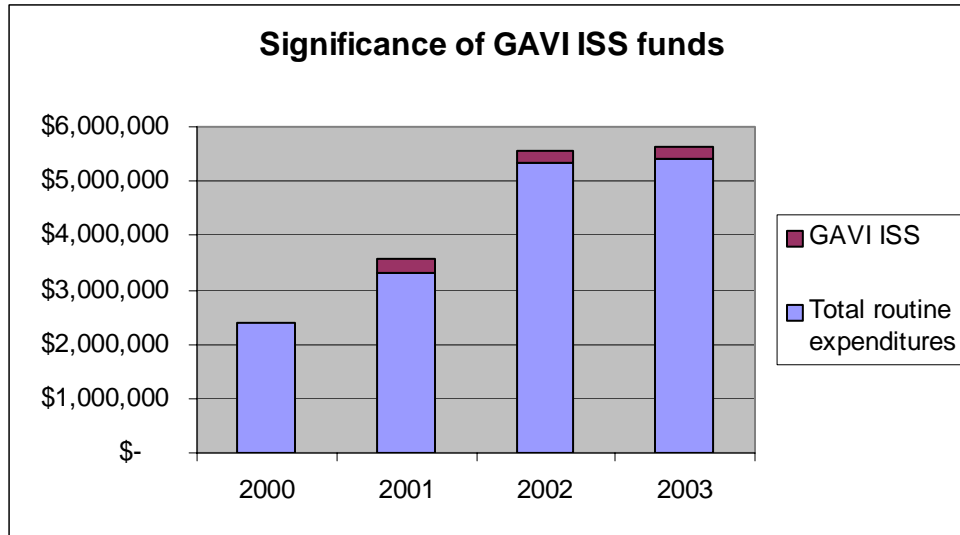
However, since the subject of this evaluation is the GAVI ISS funding, one must examine the significance of GAVI ISS funds relative to the routine immunization program.

Table 5 Significance of GAVI funding, in USD

	2000	2001	2002	2003
Recurrent expenditures	\$1,769,467	\$3,215,150	\$5,124,236	\$5,188,141
Capital expenditures	\$ 619,690	\$ 114,558	\$ 219,721	\$ 228,280
Total routine expenditures	\$2,389,157	\$3,329,708	\$5,343,957	\$5,416,421
GAVI ISS	\$ -	\$ 236,469	\$ 228,174	\$ 203,082
Recurrent expenditures w/o vaccines or injection supplies	\$1,109,337	\$1,518,243	\$1,552,895	\$1,686,148

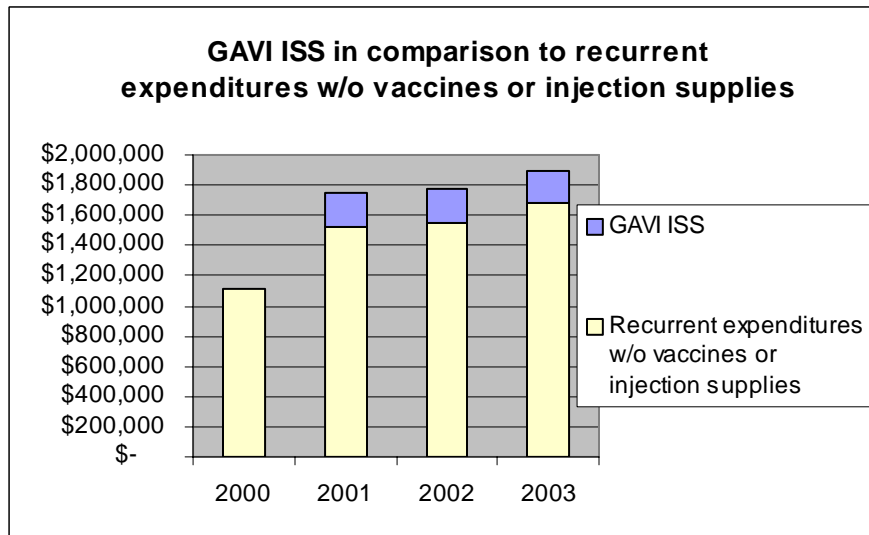
Figure 16 shows that the GAVI ISS funds appear initially to have little significance on the overall funding of the routine immunization program. However, these GAVI ISS funds were used in Madagascar primarily to fund recurrent costs that other donors did not have the flexibility to fund. Therefore an analysis was done to compare the significance of GAVI ISS funds in relation to recurrent routine immunization costs other than vaccines and injection supplies which skew the cost of the entire program.

Figure 16



The bar graph below indicates that GAVI ISS funds are currently funding 15% of recurrent expenditures other than vaccines and injection supplies. These funds are critical in funding petrol, supervision and outreaches and give districts the flexibility to use these funds without the constraints of traditional donor funding.

Figure 17



7.2. Funding after GAVI

Madagascar is facing an immediate shortage of funds due to the lack of reward shares in 2004. The Financial Sustainability Plan (FSP) states that the GAVI funding for the next three years is classified as secure, when in fact, it has been temporarily suspended until the country passes the DQA and increases the number of children immunized. Another consequence of the failure of the DQA is the buy down loan that was negotiated between the World Bank, the Ministry of Health

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and GAVI. When Tore Godal was in Madagascar in September, the World Bank had proposed a buy down loan that would have essentially matched the amount of money that GAVI was contributing for immunizations. However the World Bank was not aware that Madagascar had been declined reward shares, and therefore the GAVI ISS funds cannot be “matched.” While this does not have any effect on the vaccines and injection supplies provided by GAVI, Madagascar has essentially lost money twice: reward shares from GAVI and part of a buy down loan from the World Bank.

In the FSP strategic plan, two concrete steps were proposed to reduce the financing gap. (1) Madagascar was going to ask that its vaccines for 5 years be spread to 8 years (2) Madagascar was going to propose a new vaccine application for the introduction of Hib vaccine. The first step is even more difficult now since GAVI ISS money isn’t available to be spread out. Therefore either the government has to contribute immediately more to the purchase of vaccines or use part of the CRESAN World Bank funds. As for the second step, GAVI has not yet made a decision as to whether it will accept applications for Hib vaccine from countries that have already received five years of support for the DTP-Hepatitis B vaccine.

The GAVI ISS funds have had an effect in funding critical components of the routine immunization program and the impact of the lack of reward shares will most likely be felt at the district level during the second half of 2004 when the funds run out. However there is the measles campaign in the fall of 2004 which will consume all resources and personnel time at the district level, so perhaps the effect of the lack of reward shares will not be immediately felt in 2004.

7.3. Transactional costs

GAVI requires certain requirements to be fulfilled in order for countries to continue receiving funding. There are yearly progress reports, the Data Quality Audit, and the Financial Sustainability Plan. There are certain opportunity costs for these reporting requirements which SDV has to absorb.

When asked about these opportunity costs, the Financial Sustainability Plan stands out as the most time-consuming and human resource intensive exercise. However, despite these costs, SDV highly valued the process of developing the FSP and is now using the FSP to request funding from other donors. One example while our team was in-country, was the use of the FSP to develop a request to use some French debt relief funds for immunizations. The MOH requested the SDV to prepare a request for the use of French debt relief funds. Since SDV had already costed their immunization program, it was able to tell the MOH how it would use French debt relief funds. The FSP process has attracted attention from the Minister of Health who is now interested in conducting similar exercises for other health programs.

The Data Quality Audit has also pointed out some inherent data problems of which SDV was already aware, but it prompted the government to take some concrete actions. The last census in Madagascar was performed in 1993, and different levels of the health system are using different population growth rates. This problem was particularly highlighted in the DQA. The government of Madagascar is now planning a census scheduled for 2005.

8. Comparison of GAVI with GFATM application process and implementation, and their effects on the health system

Although our team did not meet with the GFATM focal point, we did speak with one country coordinating mechanism (CCM) member who is also part of the senior ICC. The focal point for the GFATM is the Minister of Health himself, which has made it difficult for him to attend CCM meetings. The chief of each section (AIDS, TB and Malaria) is supposed to be the focal point for their respective programs. However since the Minister has not attended the last two CCM meetings, there has been a lack of top leadership from the CCM. Identifying the principal recipient has also been difficult and has resulted in the malaria program not releasing any funds. This one ICC member expressed frustration that the government was taking out loans for activities that could be funded by the GFATM if the funds were ever released.

By comparison, the ICC was reported to be a more effective mechanism for both coordination of financing and decision making for activities. The ICC has been in existence for some years and has had a chance to develop its identify and encourage more continuous participation. In terms of procedures and guidelines, GAVI has been much more straightforward than GFATM, with one indicator (DTP3) and clear guidelines on how that indicator could be verified (DQA).

9. Discussion and Conclusions

9.1. Summary of main findings

9.1.1. Understanding of shares

During interviews it became apparent that there were differing perceptions about some key issues such as how DTP3 targets were originally set, what denominators were used, who understood what about the performance based aspects of rewards shares, what plans were used for what purpose and when, and how strategic vision for immunization actually evolves.

Although a theoretical understanding of the performance-based system exists at the national level, the actual implementation of the system and its consequences was not understood outside UNICEF and the SDV. Members of the ICC did not understand that the failure of the DQA and the decrease in number of children vaccinated with DTP3 (due to the 2002 political crisis) would result in a decline for reward shares in 2004. The funds that Madagascar will receive in 2004 are an extension of 2003 investment shares, not reward shares.

Understanding at the peripheral levels does not exist because SDV never communicated the performance-based aspects of this funding to the peripheral level. Although certain donors communicated this performance-based aspect to districts during their individual visits, there was no concerted effort from the national level to communicate with the peripheral level that

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subsequent funding from GAVI was contingent on their performance as measured by the number of children vaccinated with DTP3.

When queried about these observations, respondents said that while there was some understanding of the meaning of the performance based system at the outset, it really had not been widely internalized and incorporated into either plans or priorities at the beginning. They felt that an understanding of the system required experience and reflection. In sum, ownership of the concept, its potential utility as an improvement strategy, and its management needed to be explicitly built.

9.1.2. Performance based incentives

The flexibility of funding allocation and rewards shares were intended to function as incentives for increasing the number of children vaccinated and for improving the information system. They did not and were probably never perceived to have served as an incentive for improving the quality of information systems. In this respect, the lack of rewards as a consequence of the DQA are likely to be more effective for GAVI to communicate the importance of quality reporting at the country level. With the intense focus on the verification factor as the key indicator of quality, the first perception and reaction was to begin to insist on the correct filling of forms, and supervision and reinforcement of how those forms were filled out at CSB, SSD, and provincial levels. Trainings and review meetings are already being planned to emphasize the correct filling of forms. While this may increase Madagascar's verification factor, it will not improve data information systems.

The problem is that the focus is on reporting and not necessarily on analysis and use of information. When rewards and punishments are focused solely on reporting, constant attention is required to assure quality and data are unlinked from solving problems or improving performance. When data collectors are empowered and enabled to use their own data, there is then a reason to improve its quality in a reinforcing feedback loop. However, it takes time to build the necessary capacity for this to happen and there is likely to be pressure for quick fixes to pass the DQA rapidly in order to re-access reward shares funds.

There may be some felt connection between the idea of rewards shares and increasing coverage but is not clearly internalized and linked to subsequent motivation or actions by leaders or implementers. In some ways the goals of global initiatives have been more effectively communicated as targets for achievement than the DTP3 put forward by GAVI. With resources and technical assistance intensively invested in these global initiatives, there may be greater incentive to respond to these rather than to respond to the less directive approach of GAVI. While all these initiatives attempt to ensure mutual synergy, in day to day practice health workers make choices to do one thing or another. Repeatedly in interviews, both polio and measles campaign activities were reported to interfere with routine immunization.

In Madagascar, the fact that numbers of children vaccinated with DTP3 is the sole indicator of success for GAVI did not seem to displace attention from other antigens. Certainly measles coverage remains close to DTP3 coverage, although it would be better to review this after measles numerator data are improved. It is difficult to analyze the TT2+ data but it seems to be a

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general observation that the system has achieved more with children than with pregnant women. GAVI funding does not seem to have affected this one way or the other.

9.1.3. Planning and allocation

GAVI ISS funds were allocated to districts that requested the funding. Although they were initially targeted to the lower performing provinces, they eventually were allocated to anyone who requested them. Procedures for requesting and disbursing GAVI ISS funds followed UNICEF procedures with which they were already familiar. Local knowledge of the GAVI funds and their conditions (or lack thereof) was limited, hence there was no real decision making to use them in particular ways. Instead they were another pot of money to be accessed to fill needs that were unfunded by other sources as defined in the district annual plans.

Planning at district and CSB levels has until very recently been guided by top down instructions coupled with proposals for the same types of activities that have been tried for the past several years. Some respondents reported that there has not been a good system to effectively explore and analyze barriers and challenges either at district or central levels. So in the initial stages of GAVI funding, plans have been reactive and most attention was focused on trying to get resources to carry out everyday activities. Changes in this system have been successfully made in some areas of USAID-supported provinces and where the RED approach has been implemented. It is not yet clear if it will succeed, but the community based planning process started this year under CRESAN is also expected to strengthen this area.

The maturity of the planning process especially at district and local levels might be an important part of the context for determining the utility of ISS funding. Along with communication and internalization of intent, it may also determine the extent to which rewards shares provide an incentive for a different local response.

9.1.4. Vision, objectives and performance expectations by level

In exploring perceptions of challenges and barriers to improving routine immunization coverage at CSB, district, province and central levels, it was clear that leaders and key actors have varying objectives and priorities. Given the lack of communication of ISS funding and the performance based approach at district and CSB levels, actions are not directly relevant to GAVI expectations of the effects of the approach.

At CSB levels, health workers are concerned with carrying out the day to day schedule. In most places, this means providing vaccinations on certain days and when funds are available, in certain communities. Having recently upgraded the cold chain there are still challenges in ensuring its stable functioning and monitoring. CSB staff think they must engage in more outreach or they will not fundamentally change their coverage rates. So their objective is to see what funds they obtain to provide the outreach sessions. They are essentially still in the process of reestablishing links with communities and patients given the crisis and lack of services in 2002. At the district level, they are concerned with the quality of the cold chain at CSBs and ensuring that the vaccinations are actually given to as many children as possible. They concentrate supervision and review work in these areas, focusing on increasing uptake and reducing drop outs. Given the

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stage of development of immunization systems in the low performing provinces, these are reasonable concerns and objectives.

At the central and provincial levels, they are more concerned with obtaining resources and planning for their use, upgrading the cold chain and cold room, distributing vaccine, and carrying out initiatives from polio eradication to measles campaigns to RED. At the central level much time is spent training provincial levels so that these approaches can be cascaded to lower levels. They are concerned and frustrated with the information system and some messages have begun to go out about improving reporting. While there will always be somewhat different aims by level because of differences in roles and responsibilities, if these aims are not aligned to reach ultimate overall goals, it will be more difficult to reach them. By focusing on increasing DTP3 coverage, a common aim is maintained, but by introducing new indicators of achievement (the verification factor), the system can be skewed both positively and negatively.

9.1.5. Use of funds

While there was an initial investment in social mobilization in 2001, money was also systematically invested by districts on cold chain supervision and petrol for the cold chain in subsequent years. In 2002, GAVI ISS money played a critical role in getting vaccines out to districts during the political crisis and in 2003, spending shifted back toward the districts. During the political crisis a greater proportion of funds were spent centrally.

Most of the funds are allocated in recurrent cost areas and at district levels most of them are being used for strengthening utilization (demand), extending services closer to those who need them, and improving the quality of services in critical areas such as maintenance of the cold chain. These would seem to be the most important activities for increasing coverage which had been under funded and under prioritized before GAVI ISS funding. In fact, ISS funds were almost immediately applied to restart activities such as outreach which had been denied funding by other donors and which had not been adequately funded through government sources. What does this portend for support of critical activities in 2004 and 2005? GAVI funds have filled very important gaps to underpin ongoing services even though they were a relatively small proportion of overall spending.

At the central level GAVI funds have been used to rapidly respond to problems and crises. These “gaps” were situational and in this case the flexibility and lack of conditionality on the funds was important to their utility. In addition, it is possible that these have had an influence on coverage levels, if only to prevent more deterioration than might otherwise have happened. While there are no incentives or rewards for this kind of achievement and there is no proof, it should not be discounted given the many emergencies that arise particularly in Africa.

9.1.6. The ICC and Relationships with GAVI

The ICC in Madagascar continues to evolve as a leadership and decision making body. GAVI requirements may have helped the ICC come together around key technical and strategic areas and produce guiding documents. However, strong consensus, understanding, and commitment to what they imply should not just be assumed. Sometimes it appears that GAVI expects that once signed, these documents indicate that everything has been worked out and activities will

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automatically follow. With the ISS funding and performance-based incentives, there may have been benefit to discussion and review that went beyond progress reporting in the first two years. Some respondents in this study suggested that this could have been addressed with more requirements for what the money could be spent on or insistence on specific upgrades such as for the quality of the information system. However, there is no evidence to suggest that these changes would be better and if ownership, local leadership and empowerment at all levels of the system are important, they would seem to be counterproductive.

Given the lack of common understanding from the recent decision to withhold reward shares there does seem to be a need for better communications between GAVI and the ICC members. The GAVI-to-country communications take place on a formal level which lacks opportunities to query, discuss, and resolve differences in understanding. In the case of Madagascar, partner agencies have not stepped into “fill the communications gap”, and there even seem to be gaps in communication between central offices of those agencies and their country missions. It is possible that the GAVI Regional Working Group meetings contribute to understanding but they were not identified as a source of information during the course of these interviews.

9.1.7. Context and Special Circumstances

The fact that the DQA was conducted in 2003 using data from 2002, the year of the political crisis, was repeatedly identified as a special circumstance. This issue was raised during Tore Godal’s visit after Madagascar had failed and for those who understood that reward shares were not forthcoming, it was clear that special circumstances could not be considered under GAVI rules. Even routinely reported information demonstrated drops in coverage. One can only assume that the DQA was done because it was a requirement to be fulfilled alone, or that the learning from the process itself was considered more important than the failure. If the latter was the intent, why wasn’t dissemination and follow up structured to make the maximum use of the findings and accelerate Madagascar’s regaining ground and achieving their objectives? Given the level of understanding of what happens next, there is still unfinished business for GAVI and/or partner agencies in order to follow up on the DQA.

9.2. Conclusions

GAVI ISS funding contributed to immunization program results as part of the package of resources provided by other donors and the government. Funding levels were low compared to other donors, but the flexibility and rapidity of access to funds were important to program managers, especially for emergency or unpredicted needs and for recurrent costs not covered by other donors. It is not clear what the long term effects of this funding will be primarily because Madagascar is emerging from a period of crisis and trends in service outcomes are not yet clear though they are going in the right direction.

GAVI ISS funds do not stand alone, and while performance based measures such as DTP3 coverage are “general”, they do not necessarily fit well with other global immunization initiatives that are more vertical in nature, particularly polio eradication and measles campaigns. There continues to be less synergy than desired between these initiatives and the level of ISS funds and the legitimacy of GAVI within the spectrum of key actors (UNICEF, WHO, World Bank and

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other bilateral donors) given the relatively low level of resources through the ISS account has lead the routine systems strengthening domain to be of lower priority at specific points in time. As an incentive, the rewards shares system needs to be considered in the broader priority context.

ISS funding in Madagascar may have helped to either re-establish the immunization program post-crisis or catalyze some aspects of its development; this might include revitalization of the ICC as a collaborative body, the strengthening of the cold chain, and CSB outreach. With the possible exception of the ICC, current rather than future activity has been the beneficiary of access to the funds. This raises questions of whether sustainability through systems development is really being addressed.

The quality of data and the strength of the information system as the basis for improving immunization outcomes is a problem in Madagascar. This was known prior to ISS funding which has really contributed to its improvement. The issue has now been clearly raised by the consequences of the DQA but the question remains whether subsequent actions will contribute to long-term systems strengthening to quick fixes in pursuit of further funding.

What has happened in the immunization program and consequently also the use of GAVI ISS funds was strongly colored by the political crisis of 2002. The decision that special circumstances cannot be accounted for in the application of GAVI policies has been made. However, whether what happens next is contributory or distracting from progress forward is dependent on communications between GAVI and stakeholders in Madagascar, on the subsequent actions of GAVI partners in country, and especially on MOH decision making. There is no one obvious party, structure, or venue to lead or drive the balancing and negotiation of what comes next.

Annex 1

Contact List

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Annex 2

Schedule of Visit

April 2: Meeting with Service de Vaccination, Direction de la Santé de l'Enfant, Direction Générale de la Santé Familiale et de la lutte contre les Maladies, JSI, World Bank, UNICEF.

April 4: Visit to Toliary Direction Provinciale de Santé (DPS), meeting with DPS.

April 5: Visit to SSD (Service de la Santé de District) Toliary I, SSD Toliary II, CSB (Centre de Santé de Base) Mitsinjo of Toliary I, CSB Tsimenatse of Toliary I.

April 6: Meetings with JSI, UNICEF, WHO

April 7: Meetings with UNICEF, JICA, Institut Pasteur de Madagascar, Service de Vaccination

April 8: Visit to SSD Avaradrano, CSB II Anosy Avaratra

April 9: Meetings with Ministère des Finances et du Plan, USAID, Service de Vaccination

Annex 3

Documents consulted

Loi No 2000-024 portant loi de finances pour 2001

Projet de loi No 26/2001 du 26 octobre 2001 portant loi de finances pour 2002

Ordonnance No 2002-005 portant loi de finances pour 2003

Loi No 2003-037 du 30 Décembre 2003 portant loi de finances pour 2004

Rapport de Mission, “Participation à la reunion des responsables du programme élargi de vaccination des pays du bloc austral africain” du 9 au 13 mars 2004, Dr. Rakotomanga Raymond et Dr. Randriamanalina Bakolalao

Rapport sur l’audit de la qualité des données (CQD) de l’année 2002 Madagascar

Plan de Viabilité Financière de Madagascar, 2003

Situation du projet CRESAN II a mi-parcours, Janvier 2004

Aide-mémoire de la mission de suivi Avril-Mai 2003, Deuxième Projet d’Appui au Secteur Santé

Aide-mémoire de la mission de suivi 3-15 Septembre 2002, Deuxième Projet d’Appui au Secteur Santé

Annex 3

Organogram

