

Government of the State of Eritrea

Ministry of Health

GAVI HSS - END OF GRANT

EVALUATION

ECOSOC

September 2015

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This is not the first time that the ECOSOC is getting such opportunity. We are ready to provide adequate services to the MOH for the future in carrying out related work and contribute to the success of programs and projects that the Ministry is implementing.

Tesfamariaam Tekie Manager-ECOSOC September 2015

Abbreviations

1)	DKB	Debubawi Keyih Bahri (Southern Red Sea)
2)	EPI	Extended Program of Immunisation
3)	GOE	Government of the State of Eritrea
	HC	Health Centre
5)	HF	Health Facility
6)	HS	Health Station
7)	HCSD	Health Care Service Division
8)	HMCs	Health Management Committees
9)	HMIS	Health Management Information System
10)	HFMC	Health Facility Management Committee
11)	HSCC	Health Sector Coordinating Committee
12)	HSSDP	Health Sector Strategic Development Plan
13)	HSS	Health System Strengthening
14)	IEC	Information, Education and Communication
15)	IRC	Independent Review Committee
16)	JAR	Joint Appraisal Report
17)	M&E	Monitoring and Evaluation
18)	MCH	Maternal and Child Health
19)	MOH	Ministry of Health
20)	MLHPs	Middle level health professionals
21)	HSDP	Health Sector Strategic Development Plan
22)	NSO	National Statistical Office
23)	NHP	National Health Plan
24)	PHARMICOR	Pharmaceuticals and Medical Corporation
25)	PHC	Primary Health Care
26)	PMU	Project Management Unit
27)	RBM	Results Based Management
28)	SOS	Sustainable Outreach Service
29)	SKB	Semenawi Keyih Bahri (Northeren Red Sea)
30)	TOR	Terms of Reference
31)	UNICEF	United Nations Children Fund
32)	UNFPA	United Nations Fund for Population Activities
33)	UNIGME	UN-Interagency Group for the Estimation of Child Mortality
34)	KHT	Kebabi Health Teams
35)	WHO	World Health Organisation

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EXECUTIVE SUMMARY

Eritrea's determination for establishing a vibrant health system characterised by strategic directions was incepted by a vanguard health system management during the armed struggle for independence. The post-independence GOE espoused a protracted quest for sustainable, equitable, effective and efficient health system. Primary Health Care was maintained as the principal strategy to advance achievements for a robust health system in the context of resource constraints. Augmented by salient health system assessments and analytic reviews during the last five years, the MOH has been engaged in formulating National Health Policy and National Health Sector Development Plans enshrining broad principles and strategic directions for the establishment of a robust health system that can deliver optimum health services equitable to all the population strata.

The methodology that this evaluation employed include document review, interviews with key stakeholders and health professionals and site visits of selected health facilities in three zobas of Debub, Gash Barka and Anseba. The observations were recorded in a pre-prepared check list.

GAVI/HSS grant fund has achieved its stated objectives and targets by supporting the strengthening of the EPI system by, among other things, becoming a catalyst to other funding sources. The evaluation found out that in terms of the outcome/impact indicators, the results include that: (i) EPI coverage increased to 92 percent from the planned 85 percent (93.4 percent for boys and 92.2 percent for girls); (ii) all the six zobas have reached 100 percent DTP3 coverage; (iii) the under five mortality rate drastically declined to 50/1000 live birth; (iv) all hospitals have HSSDP-based Strategic Plans to guide their current operational plans for health service delivery; and (v) Only 34 percent of HFs have health staff according to the MOH recommended staffing norm. As outcome/impact indicators, it ought to be mentioned that the preparation of the National Health (NHP) and the National Health Strategic Development Plan (HSSDP) as well as the various guidelines and training manuals prepared and distributed with the support of GAVI/HSS grant fund, will all play a vital role in the strengthening of the health system.

It is difficult to expect the output indicators of the GAVI/HSS Grant Fund to have impacted on the strengthening of the health system since it takes time to see real impacts in such a short period of time. However, the output indicators have served their intended purpose of supporting the Health Sector Core Committee (HSCC) in their tasks of supervision and rendering direction to the project implementation and coordination as well as for the preparation of periodic reports. At the HFs level, the senior and middle level professionals have collected, used and analysed the output indicators, and have been able to take some timely decisions to change activities in the course of implementation in order to achieve planned targets.

In short, it was found out that the achievements in terms of the six output indicators to be the following: (i) The successful formulation of the NHP & HSSDP; (ii) the strengthening of the three regional training centres, which trained 1181 middle level health professionals during the project life (2010-2014); (iii) 90 percent of zobas (regions) with functional HFMC; (iv) 80 percent of senior and middle level health professionals have been trained in Result Based Management (RBM); (v) three Health Centres (HCs - Tio, Afabet and Awha) which are located in remote and difficult to access areas were upgraded to community hospitals, and three health facilities (HFs – Embatkala, Agordat hospital emergency room and Keren hospital emergency room) have been upgraded and rehabilitated ; and (vi) increase from 50 percent to 70 percent in HFs that have functional referral systems.

Health systems strengthening efforts are being supported by other sources like the Global Fund and UN partners, however, there is no specific partner support to meet objectives as outlined in the GAVI HSS

proposal. Nonetheless, given the remarkable achievements this 'End of the GAVI/HSS Grant Fund Evaluation of 2010-2014'', calls upon the MOH and GAVI/HSS to continue the project with the goal of further strengthening the health system and sustaining the gains achieved. The specific lessons learned and specific recommendations are presented below for consideration by the MOH and GAVI/HSS.

Lessons to be learned

- A central part of GAVI/HSS's approach is to enhance the health sector's human and institutional capacities through its various interventions, which are designed (more glaringly at the implementation stage) to operate in synergy with government's and other partners' resources. In this regard, the evaluation found that almost all of GAVI/HSS support supplement and complement project activities funded by other major development partners.
- Another important lesson learned is that more focus is needed in the selection of the objectives and activities such that the alignment of the Grant Fund with the EPI program will be more explicit. In this project which is the subject of this evaluation, there were too many activities with inadequate budget for their delivery, hence making it difficult to achieve tangible and measurable results.
- Because of the inadequate amount of money allocated for the many and fragmented activities, some of the planned activities could not be implemented. This problem was timely identified and a suggestion for reprogramming forwarded by Health Sector Coordinating Committee (HSCC) to which GAVI/HSS readily approved the suggestion. The lesson that can be drawn here is that regular monitoring and evaluation of projects does help in timely changing course, which ultimately helps to achieve the set objective of projects.
- Commendable results have been achieved by GAVI/HSS support to strengthen the health system through the activities implemented and the ensuing registered outcome/impact of the Grant Fund; albeit the relatively small grant fund allocated for the country. In the opinion of the evaluator, there are many cases where a project has achieved its stated objective and outcome/impact but nonetheless have collapsed once the project phased out. If the gains so far registered are to be sustained, GAVI/HSS should include in its forthcoming round of financing a sound exit strategy that would ensure the sustained delivery of the health system. This is the prime lesson to be learned.
- While at the project level results have been recorded, the Fund appears to be less effective at instigating systemic health delivery mechanisms at the national and regional levels. The need for a multi-pronged approach to confront and solve the challenge, so that synergies could be generated between the different health professionals, the health management team, and the health management committees established at all levels of the health delivery structure. In this connection, the challenges posed in retaining health staff in general and senior and middle level health professionals in particular need to be addressed. The prevailing salary scales and motivational systems appear not to have significant effect for the retention of skilled health staff,
- GAVI/ HSS Grant Fund was critical in supporting the production, skills upgrading, increasing levels of motivation of the health staff in general and senior and middle level staff in particular. This evaluation believes that this has contributed to better services delivery, and it has to continue, with much more funds in future.
- The evaluation found little evidence that the training given in RBM (data management and utilisation, conducting research in operational management, etc.) has been mainstreamed to help make informed decision making at the HF level. There are many reasons why this is so the lean health staffing pattern being the most prominent of them leaving little space and time during working hours to exercise RBM. Nonetheless, the evaluation found out there is significant value-added of such exercise for the heath sector in general and for strengthening and sustaining the EPI program in particular.

- There appears to be some remaining areas of capacity that have not been addressed in the training of RBM, albeit that their reference in the Fund's project document, including: (i) the creation of data base for tracking HSS and other health sector indicators for informed decision; (ii) monitoring the efforts of MOH professionals in RBM practice and training to maintain and sustain a critical mass of health professionals proficient in RBM; and (iii) providing training opportunities in selected high value health courses (e.g., public health in complex emergencies and high level distance education training in public health principles in developing economies).
- The need for timely disbursement of funds from GAVI HQs in order to maintain momentum of implementation pace of activities is another important lesson learned in this evaluation.

Limitations of the Study

- GAVI/HSS resources were not big enough as compared to that of Global Fund, Government, UNICEF and other sources earmarked for child and maternal health program in general and EPI in particular and training of health workers. Hence, its contribution in impacting on these programs could be said to be limited, albeit that it played an important role in strengthening the health system by complementing other wide ranging activities.
- Due mainly to the inadequate fund allocated for this evaluation, it was not possible to analyse and compare the performance of health facilities that have directly benefited from GAVI/HSS Grant (like solar panels and basic recreation facilities to staff quarters) and those that have not; hence making it difficult to draw distinction between beneficiary and non-beneficiary health facilities.

Recommendations

For the MOH

- Consider the review of the RBM approach with the aim of constructing simplified procedure so that grass root Health Management Committees will manage to prepare periodic monitoring reports of their own to help them in decision making at their level. Coupled with this, ensure sustained participation of health workers and health management teams/committees established at the different levels by giving continuous refresher course in RBM's main components including data compilation, management and analysis and conducting small researches.
- Finalise the participatory consensus building workshop to identify core minimum national indicators.
- Train health workers on proper recording of the health system report and further strengthen the use of EPI Registers as was found at some HF. In addition conduct 'Data Quality Self Audit' and validate administrative data and records so as to iron out issues of recording and tallying.

For GAVI/HSS

- Further support for the 'Integrated Sustainable Outreach Services (SOS)' in the hard to reach areas, through financial support, transport and logistics, and expenses related to continuous and frequent visits.
- A more simple solution that would help improve staff retention and motivation is the provision of solar light to HFs as well as to staff living quarters. The funding of this imitative should be scaled up to rural HFs where there is no connection to national electricity grid.
- Increase the financial allocation of EPI to consolidate the gains so far made by the provision of transport and logistics, and DSA for national and regional level supervision. Newly

recruited staff and existing staff in the zobas who manage the cold chains need training and retraining.

For both the MOH and GAVI/HSS

- In order to sustain the benefits derived so far and in order to achieve greater outcome/impact, GAVI/HSS should redouble its efforts and mobilise more financial and technical resources. Concomitantly, the MOH and GAVI/HSS should devise mechanisms to more systematically coordinate activities for maximum gains in efficiency and productivity.
- Intensify IEC and health education with the goal of bringing about behavioural and attitudinal changes as well as to reach the hard to reach infants and children for immunisation.
- The organization and management capacity of the Grant Fund has to be strengthened. The timely reports requirement, by GAVI HQs, among others, necessities that there is a need to establish core staff totally dedicated to the over sight and follow up of the GAVI/HSS Grant Fudn.
- The MOH should continue to exert untiring efforts to minimise the obstacles for the practical application of RBM; and for GAVI/HSS to continue to avail financial resources to sustain the achievements thus far achieved.
- Conduct 'Data Quality Self Audit' and validate administrative data and records so as to iron out issues of recording and tallying.

1. Introduction and Background Context

During the last two decades of Eritrea's independence, the Government of the State of Eritrea (GOE) persistently espoused a protracted quest for sustainable, equitable, effective and efficient health system. Primary Health Care was maintained as the principal strategy to advance achievement of a robust health system in the context of resource constraints. Augmented by salient health system assessments and analytic reviews in the last five years, the Ministry of Health (MOH) has been engaged in formulating National Health Policy and National Health sector development Plan enshrining broad principles and strategic directions for establishment of a robust health system that can deliver health services equitably to all its people. Furthermore, restructuring of existing organizational structure of the MOH along with the development of job description documents for all categories of health workers was successfully carried out. This has, among other things, contributed to facilitating the smooth preparation of the policy and plan documents that had impacted in the overall strengthening of the health system,

The Health Sector Strategic Development Plan (HSSDP) is aimed at providing direction towards improvement and sustainability of the health status of the Eritrean people by reducing morbidity, disability, and mortality, improving nutritional status and raising life expectancy by recognizing the cardinal role of good health in poverty reduction and economic development. It also revolves around mobilizing and managing limited resources in order to maximize quality of care and provide cost-effective, health services as close to the household as possible.

The completion of the Health Sector Strategic Development Plan (HSSDP) is included as one of the objectives of this round of GAVIHSS grant. Taking into consideration the overall socio-economic situations of Eritrea and the current state of development of the health sector in one side and taking note of the prevailing resource limitation and high demand of health services from the general population on the other, the GAVI-HSS grant funding was made to focus on barriers at three levels: (i) Health Policy Level; (ii) Heath service delivery/facility level; and (iii) Community level. These are elucidated below.

A. Health Policy Level Barriers

- Completing the formulation of the National Health Policy (NHP)and the Health Sector Strategic Plan (HSSP)
- Strengthening Human Resource Development for sustainable HRH work force production and maintenance to off-set the currently shortage of skilled health professionals.
- Challenges in information, education and communication (IEC) for Health and Health Promotion: No routine EPI specific communication policy and strategic plan.
- No policy framework for RBM and utilization of HMIS for evidence-based decision making
- Occasional resource constraints for operationalising HSCC functions.
- Constraints in sustaining health sector achievements at all levels: mapping out sustainability strategies for all levels of health sector achievements.

B. Health Service Delivery/Facility Level Barriers:

- Weak health provider-community interface / dialogues hampering community participation and community demand for EPI and other health services
- Health workers lack skills for effective interpersonal communication with patients, care givers and clients
- Constraints in cold-chain management: (i) Shortage of trained cold chain technicians, (ii) replacement of aging cold chain equipment and procurement of spare parts, (iii) difficulty

in meeting costs of assessment and annual inventory of cold chain equipment, (iv) need to computerize EPI equipment and commodity database.

- Weak Results Based Management (RBM): Need to enhance Optimal Quality Management (OQM) of the health system through strategic planning & management, monitoring, evaluation and support, supervision, and evidence-based decision making.
- Inadequate technical and financial capacity to improve the quality and management of the HMIS, including enhancing utilization of HMIS for evidence-based decision making.
- Strengthening HMIS at arid Zoba level to ensure availability of information for planning, implementation, monitoring and evaluation.
- Establishing sustainable evidence-based decision making with strong community based HMIS using the VHTs.
- Developing HMIS Databases at all levels
- Extensive Destruction of health infrastructure need for rehabilitating and constructing health facilities damaged by war; provision of essential medicines and equipment and ensuring their availability.
- Challenges in implementation of communicable and non-communicable disease control programs at all levels: minimal community based disease surveillance and reporting.
- Referral system weakened by several bottlenecks
- Attaining equitable coverage to provide basic clinical and emergency services so as to enhance equity of access to health services in all communities.
- Lack of means of transport and communication for integrated outreach services at all levels.

C. The community level barriers included:

- Life style of the nomadic population at the costal districts
- High drop-out rate between BCG Measles in four out of the six districts (Zobas)
- Need for community empowerment
- Limited community access to essential information on health services delivered by health facilities.
- No forum for community-health provider interface/dialogues
- Lack of awareness on health rights and responsibilities
- Equity of access to health services still sub-optimal

In the Joint Annual Review (JAR, 2013 and 2014), it was noted that GAVI/HSS grant fund cannot address all the above explained barriers, but is aimed at helping tackling some of them, in which the MOH takes care of the remaining, by using other resources at its disposal. Based on the above stated rational, therefore, the HSCC developed six core objectives to effectively strengthen Eritrea's health system, by utilizing the current funding opportunity over four years of implementation period. The six objective will be elaborated in section 4 below.

2. The Current Situation of the EPI Program

Eritrea has consistently reduced child mortality by four percent annually in the last decade. The successes are mainly attributed to efforts of Ministry of Health (MOH) and its partners in the areas of successful control of vaccine preventable diseases including measles control, improvement in prevention and case management of main childhood killer diseases (ARI, Diarrhea, and Malnutrition). Eritrea is one of the three Sub Saharan African countries on track to have achieved MDG 4. The infant mortality rate (IMR) dropped to 42 deaths per 1,000 live births in 2010 (a reduction from 72/1000 live births in 1995), and under-five mortality (U5MR) is 65 deaths per 1,000 live births in 2010 (a reduction from136/1000 live births in 1995).

Within the MOH administrative structure, EPI is a unit within the Department of Public Health Services and is directly responsible to the Director of Family and Community Health Division. The MOH articulates policy standards, sets priority and capacity building, and links with other stakeholders and donor partners for resource mobilization. At the Zoba level, the EPI falls under the Family and Community Health Division. EPI service delivery is integrated with other MCH services and it is delivered as a package in all health and outreach facilities.

In Eritrea, EPI was launched in 1980 and following the political independence of the country in 1991 immunization service was provided in 125 health facilities at static and in 45 outreach sites. Before independence fully immunised infants under one 1 year were about 9.4%. Since independence, however, the National Program on Immunization has made significant progress in developing and delivering immunization services for children and women through routine immunization activities. In 2011 immunization was provided in 256 Government and 32 Private/NGO health facilities at static and 385 out-reach sites. The percent increase for the Government facilities comes to 122 percent (HMIS, 2011).

3. GAVI/HSS in Eritrea

Given the above context, Eritrea for the first time applied for GAVI/HSS funding in the October 3, 2007. The application got conditional approval in the last quarter of 2009. After meeting the conditions and answering the Independent Review Committee (IRC) queries and giving the clarification, the request finally got full approval in the first quarter of 2010. The total budget for the Grant was \$ 2,778,485 to be released in four trenches. The first trench - \$ 664,000 was received on June 1, 2010. The annual implementation period was agreed to extend from June to May with an Annual Project Review (APR) to be submitted on the 15th of May of every year. The second trench - \$ 694,250 was received on December 20, 2011 exactly after six month of delay. No money was released at all during the whole year of 2012 and the first quarter of 2013, until when the PMU/MOH received the third round of budget on May 9, 2013 amounting to \$ 694,520. The fourth trench was received in June 2014 amounting to \$ 725,715.

In 2012, that is, during that period of no money received, a re-programming of activities for the two years of 2013 - 14 of implementation was made. From the documents reviewed and from the key informants' interview, the activities that were cancelled as a result of the reprogramming and in favour of other Extended Program of Immunisation (EPI) related activities were covered by Government, Global Fund, UNICEF, UNFPA, WHO and other partners. Nonetheless, it could not be denied that GAVI/HSS grant fund played a great complementary role in strengthening the health system in general to bring result in the entire EPI program. The main focus of the evaluation will therefore be the establishment of the evidence of the Grant Fund's contribution of health systems strengthening for better immunization outcomes.

4. Objective of the GAVI/HSS Grant Fund

The prime objective of GAVI/HSS is to achieve and sustain increased immunisation coverage, through strengthening the capacity of the health system to provide immunisation and other health services with focus on child and maternal health. The activities that would need to be implemented with GAVI/HSS support are the ones that would help achieve, among others, the following objectives:

- i) Improving the delivery of essential health care packages' including provision of integrated maternal and child health (MCH) services, at all levels of health care provision.
- ii) Increasing the production of new health workers so as to strengthen the capacity of human resources for health to deliver health services effectively and efficiently.

- iii) Establishing and training functional and participatory management structures at all levels of the health system.
- iv) Strengthening Results Based Management (RBM) of health workers to reflect strong evidence based decision making at all levels of the health system, and thereby strengthening the health information and monitoring system.
- v) Rehabilitating health facility infrastructure for provision of quality health services, and
- vi) Developing and make available policy and management guide documents at all levels. The life of the project, as prescribe in the TOR, starts from the disbursement of the first trench to the fourth trench by GAVI/GAVI/HSS, hence the evaluation period will be from be June 2010 to October 2014.

5. Objectives of this Evaluation

The TOR for this evaluation specifies the general objectives as:

- The generation of information that could be the basis for future round of application for GAVE/GAVI/HSS grant
- Learning lessons from past experience and improving future performance.

The specific objectives include:

- Assess the program/underlying factors in management, coordination and financial mechanisms which support HS implementation at the national, zoba and sub-zoba/facility levels,
- Assess the status of GAVI/HSS support implementation using the performance indicators included in the funding application document.

6. The Evaluation Methodology

6.1. Methodology

In order to exhaustively answer and address the <u>nine</u> evaluation questions stated above the following process/methodology was followed:

- Document review and in-depth analysis of relevant information
- Interviews with key stakeholders
- Conduct field visits to selected health facilities in three zobas that randomly selected from the list of health facilities in the respective zoba and that were beneficiaries of the GAVI/HSS Grant Fund) conduct interviews with key health professionals (see Anex ... for list of interviewed persons) and make observation with a pre-prepared check list the zobas that were visited are Debub, Gash Barka and Anseba.

6.2. Study Design

The evaluation attempted to analyse the expected links between GAVI/HSS inputs and the targeted outcome/impact measures, albeit that this was difficult for two main reasons:

- i) GAVI/HSS resources were not big enough to cause any major impact, and at best it complemented other wide ranging activities targeting child and maternal health program in general and EPI in particular.
- ii) Substantial portion of most of the interventions/programs in the health system are also funded from other sources, both Government and development partners (Global Fund, UNICEF, WHO, UNFPA, and others).

Nonetheless, all efforts were made to make informed and verifiable analysis and assessment on how well GAVI/HSS contributed to the achievement of its stated objectives. It would have been interesting to analytically explore the differences between those health facilities that have benefited from GAVI/HSS grant and those that have not. However, such analysis, although important, was not feasible due to the relatively little funding and, therefore, absence of clear distinction between beneficiary and non-beneficiary health facilities.

6.3. Interviews of Key Informants and Validating Issues

The evaluation team conducted an extensive review of documents on Eritrea's health system strengthening efforts. Using a semi-structured interview guide, the study team conducted 24 interviews with key informants (see Annex 5) who were either involved in the GAVI/HSS application or had good knowledge of the implementation of GAVI/HSS in the country. A little less than half of the informants were from the main office of the MOH and the rest from the zobas including from selected beneficiary health facilities and training centres.



Fig. 1: Discussion with Zoba Health Management Committees - Zoba Anseba

The analysis of the findings, lessons learned, conclusions and recommendations of the evaluation was drawn from the information and evidences secured from the reviewed documents and the key informant interviews. Given the objectives of the evaluation, focus was made on the first experience of GAVI/HSS grant (1st to the 4th trenches). For this reason the sample was purposive, which enabled the evaluation team to come out with intrinsic values based on actual facts and experiences, albeit that at least some of the outcomes/impact that are drawn may not be solely attributed to the support given by GAVI/HSS.

All throughout the process of the evaluation the team exercised due care and caution to minimise biases. Arguments forwarded and judgements passed are backed by quoting informed sources from the interviewed health professionals and workers as well as from reviewed documents. These in turn was substantiated by on-site observations of health facilities and services.

7. Reprogramming of the GAVI/HSS Grant Fund

Before fully venturing into the analysis on the findings of the evaluation, reprogramming of the Grant Fund made in the middle of the project life. What was the rationale of this decision? What were the reprogrammed activities? The information presented below provides some clue to these questions:

- i) During the preparatory stage of the GAVI/HSS Grant Fund document, the overall objective was to address wide ranging health systems gaps with some links to the EPI. However, it was felt that the revised program need to make more focus on health systems gaps with direct links to the EPI program, and accordingly some of the activities were re-scheduled. An example of such focus is the priority that was given to building staff accommodation for health workers serving in remote facilities as opposed to upgrading a lower level health facility to a community hospital. This was believed to contribute to staff retention which in turn could go a long way in strengthening the health systems and that could lead to more children vaccinated.
- ii) Another intervention that was felt important for sustaining EPI and strengthening the health system was the procurement of photovoltaic solar system for health facilities. This was especially found to be vital in view of the prevailing recurrent shortages of electricity power supply from the national grid. Hence, to complement the shortages the provisions of solar power to remote facilities has been found to be useful and appropriate. This obviously contributes to maintaining the cold chain system and also for the day-to-day running of the facility to carry out other tasks that require availability of electricity.
- iii) The total budget that was allocated for the four years was \$ 2,778,485, giving an average annual budget of \$ 650,000. This budget has proven to be very low when reallocated to the six objectives and the activities under these objectives, thus making it rather difficult to deliver the intended project outputs. Therefore, the need to combine some of the activities and achieve results became very apparent.
- iv) For efficiency gains and economics of scale, procurement that was meant to be done in the third and fourth implementation years was implemented on the third year. This action resulted in the fast and advanced delivery and disbursement of drugs to facilities.
- v) Building health workers capacity in management of EPI related data with acceptable degree of accuracy and timelines was also one of the re-prioritized activity. An example of such activity is training of health workers in data quality.
- vi) In the original approved document there was a plan to build 10 placental incinerators. In the rescheduling exercise incinerators were given preference simply because the money was not enough to complete both activities and because of the introduction of new vaccines the volume of wastes increased, and thus necessitating their safely disposal.

The MOH and GAVI/HSS in recognition of the above situation approved the mid-term reprogramming and effected some changes in the activities to be implemented under the originally incepted six objectives. The specific changes that were made include:

- i) The support for the production of quarterly HMIS bulleting in the original program activity 4.4 was used for the preparation of HMIS data collection guidelines and was merged with activity 4.7.
- ii) Following the dissemination of the HMIS data collection guide in 2011, the remaining task was reprogrammed for 2014-15 with activity 4.7 (training of health workers in ICT and computerized

data management skills needed for operating computerized HMIS). Thus, activities 4.5, 4.6 and 4.7 were all combined to activity 4.7.

- iii) Activity 5.1 in the original program was planned for the provision of water supply for HFs. Due to the inadequacy of the fund this activity was merged with activity 5.2 (purchase of solar panels and batteries).
- iv) Activities 5.6 (upgrading three health centres, in remote coastal areas, to the level of community hospitals) was merged with activity 5.7 (construction of accommodation for health workers in the selected 3 remote HFs).
- v) Activity 6.2 (Carry out household based water quality control in all the six Zobas during both rainy and dry seasons) was merged with activity 6.3 (supply chemicals and reagents for water quality control in all the six zobas).
- vi) Activity 6.6 (improve referral system through training in triage and emergency management including referral of patients using the Emergency & Referral Manual) was reprogrammed and merged to accomplish activity 6.7 (Carry out regular integrated supportive supervisions).
- vii) Activity 6.10 (train communities and teachers in VHTs and HMCs) in early detection and response to outbreak of vaccine preventable diseases), was merged with 6.9 (train health workers in early detection and response to outbreak of vaccine preventable diseases).

Overall, the finding of the evaluation is structured in a manner that answers the questions asked in the TOR and that reflects the changes in program activities. Hence, first a broad view of the results achieved will be presented by analysing the outcome-impact of the project to provide reasonable answer as to how far GAVI/HSS support has helped in strengthening the EPI system as a whole. More specific activity output will be presented following the six objectives of the project.

8. Findings and Analysis

8.1. GAVI/HSS Financial Analysis

The objective-based financial budget of the Grant Fund is USD 2.78 million. The budget was disbursed in four trenches, namely: (i) first year's funds amounting to \$ 664,000 was actually received on the 1st of June 2010; (ii) second year's budget of \$ 694,250 was received on the 20th of Dec. 2011 (exactly after six month of delay); (iii) the third round budget USD 710,118 was released on the 9th of May 2013; and finally (iv) the fourth and final round, amounting to USD 710,118 was released on November 10, 2-14, exactly after one year and five months.

On average the annual budget comes to about USD 694,621, and when this budget is spread over the six objectives and further broken down to the set of activities within each objective, the amount appears to be grossly inadequate given the barriers mentioned in the introductory section of this report. It goes without saying, therefore, that the remarkable achievements recounted in the previous pages wouldn't have been realized without the financial complement from Government and other partner organisations. In other words, GAVI/HSS grant fund was in most cases utilised in conjunction with other donors' fund. In fact, this problem was anticipated prior to the disbursement of the third round of payment. As a result, a reprogramming for the activities under the six objectives was done – reprogramming which involved the merger of activities as described in section 7 above.

The analyse to what extent the fund has been utilised and for what purpose is indicated from Table 1. During the project lifetime, the total budget was USD 2.778,485, of which 85.3 percent has been utilised as of May 2015. The rest is reportedly committed to be utilised by December 2015. To the extent that fund utilisation is a proxy indicator for performance of an activity, there is an over expenditure by about 7 percent for objective 1 '*formulation of National Health Policy & National Health Sector Development*

Plan', and there is low performance in objective 2 *'increase production of new health workers'* since only 59 percent of the allocated budget is utilised. Given the unfulfilled staffing norms of HFs caused by the apparent shortage of health workers (especially middle level health professionals), it goes without saying that more efforts needs to be exerted in the training program of the sector. It should be noted, however, that there is five months to go until the end December 2015, by which time it is expected that most of the allocated budget for the activities will be utilised.

No.	Title of objective	Planned	Actual	Variance	Percent utilized
1	Formulation of National Health Policy &				
	National Health Sector Development Plan	42,000.00	44,871.54	-2,871.54	106.8%
2	Increase production of new health workers	472,500.00	278,745.99	193,754.01	59.0%
3	Establish functional participatory mgt structures				
	at all levels of the H- system	68,500.00	52,963.16	15,536.84	77.3%
4	Strengthen Results Based Management (RBM) of health services to reflect strong EBDM at all				
	levels of the health system	234,000.00	204,157.63	29,842.37	87.2%
5	Rehabilitate health facility infrastructure for provision of qty' health services	575,295.00	505,678.06	69,616.94	87.9%
6	Improve delivery of essential health care packages [,] including provision of integrated maternal & child health (MCH) services	566,000.00	536,505.21	29,494.79	94.8%
	Birth Cohort	,	,	·	
		356,000.00	321,066.43	34,933.57	90.2%
	Support Management Cost	464,190.00	427,118.60	37,071.40	92.0%
	TOTAL USES OF FUNDS	2,778,485.00	2,371,106.62	407,378.38	85.3%

Source: PMU/MOH, July 2015

8.2. Efficiency analysis

In the opinion of the evaluation team, much needs to be desired with the flow of funds from GAVI/HSS to the country. From the second trench of disbursement to the last (4th trench), the flow of fund was not smooth – there were delays of 6 month to disburse the 2nd trench, 12 month for the 3rd and 16 months for the 4th and last round to arrive from GAVI/HSS to PMU/MOH (Table 2). This flow of fund is inefficient since too much time is wasted in between the flow of funds which, among other things, have contributed to the delay in the implementation of planned activities.

What is more worrying, however, is that the delay increased from 6 months to 16 months from round two to round four, and no action was taken either from GAVI/HSS or the MOH. The problem was noticed and reported in the various report, including the MOH Annual Assessment Reports, GAVI/HSS Annual Progress Reports (APRs), GAVI/HSS Joint Appraisal Reports (JARs) and in the Annual Audit Reports. According to these reports, the problem was caused by: (i) delay in submission of reports from implementing agencies; (ii) delay in disbursement of funds from GAVI; (iii) inadequate allocated budget for activities.

S. No	8.		Approved Budget (in USD)	Disbursed (in USD)	Disbur	sement	Delay
	From	То			Planned	Actual	
1.	June '2010	May '2011	664,135.00	664,000.00	01.06.10	01.06.10	0
2.	June '2011	May '2012	684,055.00	694,250.00	01.06.11	20.12.11	6 Months
3.	June '2012	May '2013	704,580.00	704,500.00	01.06.12	09.05.13	1 Year
4.							16 Month, (1
							Year &
	June '2013	May '2014	725,715.00	715,250.00	01.06.13	10.11.14	5months)
	Total		2,778,485.00	2,778,000.00			

 Table 2: GAVI/HSS Budget disbursement schedule (as of May 2015)
 Image: Comparison of May 2015

Source: PMH/MOH, July 2015

8.3. Output-impact of the Grant Fund

The output-impact analysis gives plausible answers to the issues of: (i) to what extent has the GAVI/HSS grant fund achieved its stated objectives and targets as described_in the HSS application document; (ii) how far has the GAVI/HSS support helped in strengthening the EPI system in the country; and (iii) to what extent the GAVI/HSS fund were catalytic to other funding sources in the sector.

The main objective of GAVI/HSS is to achieve and sustain increased immunisation coverage, through strengthening the capacity of the health system to provide immunisation and other health services with focus on child and maternal health. The achievement of this objective is best illustrated in Table 3. From the outset, however, it should be noted that the targets and results achieved should not be attributable solely to GAVI/HSS grant financing. They are the cumulative result of all the funding by other major donors and partners in the same program/projects.

The fund's contribution is most vividly observed in the strengthening of the EPI System that had profound impact on the improvement in EPI coverage from the planned 85 percent to 92 percent. All the six zobas have achieved 100 percent DTP3 coverage, the U5 mortality rate has drastically declined to 59/1000 live birth, and all hospitals have HSSDP-based Strategic Plans to guide their current operational plans for health service delivery, and 34 percent of HFs have fulfilled the MOH recommended staffing pattern.

Table 3 indicates that the indicator of 'HFs fulfilling at least 60% of the MOH recommended staffing norm' was not achieved. As of the writing of this report, only 34 percent of HFs have staff according to recommended norm of the MOH, down by 6 percent from the baseline value in 2010. Part reason for this state of affairs could be the high wastage of qualified staff. This calls forth the need to be more vigilant in training, recruiting and replacing lost staff as well as in devising innovative ways and means of retaining staff in their place of assignment.

No.	Indicator	Baseline value	Planned	Achievement/ source and date
1.	National DTP3 coverage (%)	81.9%	85/1000	92%
2.	% of Zobas achieving 80%	2/6	6/6	The survey included all six
3.	U5 mortality rate	93/1000	70/1000	50/1000

Table 3: Outcome and Impact Indicators

No.	Indicator	Baseline value	Planned	Achievement/ source and date
4.	% of skilled birth attendance	30%	40%	32.5 % (HMIS, Annual Health
5.	% of hospitals that have HSSDP-	NA (figure was	75%	100% (Health Facility
6.	% of HFs fulfilling at least 60% of the MOH recommended staffing	40% (MOH/HRD Assessment Report - 2006)	60%	34%

Source: GAVI/HSS End of Grant Fund Evaluation, July 2015

To reiterate, the national EPI coverage figure, which was 82.9 percent in 2006, a set target of 85 percent was given as an indicator for the Grant Fund. In 2013, a remarkable percentage figure of 92 percent coverage was recorded (Epi Survey of 2013). This survey was carried by the MOH- Department of Public Health, with close technical and financial support from UNICEF and WHO Team (IST-ESA), and it covers all the six zobas. For the under five mortality rate the target was to achieve a reduction from 93/1000 live births (DHS of 2002) to 70/1000 live births. By the end of 2014 it declined drastically to 50/1000 live births according to the UN-Interagency Group for the Estimation of Child Mortality (UNIGECM). With regards to the percentage of children born under skilled birth attendants, the Fund's target was to raise it from 30 percent to 40 percent. However, a marginal raise of only 2.5 percent was recorded by the end 2014 (HMIS Annual Health Service Activity Report, 2014).

8.4. Output indicators

The output indicators were meant to serve as a methodology for mapping out data collection, analysis and use by the top leadership of the HSCC (MOH, WHO, UNICEF & MOF), as well as hospitals and HFs at the national and sub-national levels. The evaluation has found out that the HSCC has utilised these indicators in its efforts to supervise and give direction to the Grant Fund implementation and coordination as well as to prepare its periodic reports. At the HFs level, the different actors in the health system have, not only, collected, used and analysed the indicators, but also enabled them to know where they are in terms of implementation status. They have, reportedly taken timely decisions to change activities with the goal achieving the planned targets. In short, the six output indicators (Table 4) have been very important to indicate to the implementers as to whether the activities are being implemented as panned. Detailed analysis on the activities that were undertaken under each objective and the results achieved will be presented in section 7.6 below.

No.	Indicator	Source	Date of Baseline	Plan	Actual achievement, date & Source
1)	The NHP & HSSDP formulated	MOH Annual Report	2005	2	The NHP and the HSSDP have been formulated (MOH Planning Office, July 2015)
2)	Number of Regional health training institutions producing middle level health professionals & number trained.	Reports of Regional Health Training Institutions.	2006	3	 There are three regional training institutions In 2015, 1181 middle level health professionals (associate nursing) – 60% women have been trained. (Source: ZonalAssocciate Nurse Schools Coordinating

Table 4: Output indicators	for monitoring and evaluating	the GAVI/HSS Grant Fund
Table 4. Output mulcators	ior monitoring and cratuating	

No.	Indicator	Source	Date of Baseline	Plan	Actual achievement, date & Source
					Unit- HRD/MOH)
3)	Percent of sub-Zobas with functional HFMC	HMIS & Zoba reports	2006	90%	90 % (ECOSOC Field Assessment, 2015)
4)	Percent of hospitals with 60% of the senior and middle level health managers trained in RBM 1& 2 courses	Annual MOH Report	2005	50%	80% of senior and middle level health managers were trained in RBM 1&2. (Source: Health Facility Management Division)
5)	Percent of health centres upgraded to community hospitals	Health Facility Management Division	2006	10%	About 6% Achievement (Source: Health Facility Management Division) 2015) 3/47
6)	Percent of health facilities with functional referral systems	EPHS	2005	50%	70% (Source: Health Facility Management Division) 2015

Source: GAVI/HSS End of project Evaluation, July 2015

8.5. Activity Report by objectives

Objective 1: Complete formulation of the National Health Policy and HSSDP by the end of 2010

Table 5: Preparation of the NHP and HSDP

No.	Description of Implemented Activities (2010-2015)	Results Achieved	Source	Result score
1.	Finalize formulation of the National Health	Completed in	Policy and Planning	100%
	Policy Document	2010	Division (MOH)	
2	Disseminate the National Health Policy	Completed in	Policy and Planning	100%
4	Document at all levels including the	2011	Division (MOH)	
	diplomatic corps			
3	Finalize formulation of the National Health	Completed in	Policy and Planning	100%
	Sector Development Plan	2012	Division (MOH)	
4	Disseminate the National Health Sector	Competed in	Policy and Planning	100%
.4	Development Plan at all levels including the	2012	Division (MOH)	
	diplomatic corps			

Source: Planning Division, MOH, 2015

The NHP and the HSSDP documents were prepared in 2010 and disseminated in 2011 and 2012 to all zobas and HFs. The evaluators verified the existence of the documents in the zoba Debub, Anseba and Gash Barka and the three respective zonal referral hospitals visited. The key informants believe that the NHP and the HSSDP will help them to keep abreast with the policies and target goals of the health sector, and thereby contribute their share in the fulfilment of the plan, as well as enable them to prepare operational plan at level zoba, sub-zoba and HF. Other documents that were prepared and disseminated using the grant fund of GAVI/HSS are indicated in Table 6. They include training manuals, guidelines and job description for health management teams and committees, and assessment documents on sub-zoba heath systems, referral systems and emergency services assessment. The duties and responsibilities

of the health management committees at the hospital, zoba and sub-zoba levels (Annex 2) have also been prepared and disseminated to HFs.

Table (. I ist of Decomposite	Manualaand	Cuidalinas Distuibuted	
Table 6: List of Documents,	Manuals and	Guidennes Distributed	

No.	Documents
1)	Documents:
	National Health Policy
	The Health Sector Strategic Development Program
2)	Training Manuals
	HMIS Training Manual
	Health Systems Research Training Manual
	Management of Zoba Health Systems Training Manual
	Community Entry and Partnership Training Manual
3)	Guidelines
	Management Guidelines
	Zoba Health Team Guidelines
	Sub-zoba Health Team Guidelines
	Hospital Health Team Guidelines
	Hospital Guidelines FOR Management of Common Medical Emergencies
4)	Management Committees
	Zoba Health Management Committee Guideline
	S.Zoba Health Management Committee Guideline
	Kebabi Health Management Committee (KHC) Guideline
5)	Job Descriptions of Health Management Committees document
6)	Assessments documents
	District Heath Systems Assessment
	Referral Systems Assessment
	Emergency Services Assessment

Source: MOH, Planning Division, July 2015

Objective 2:To increase the production of new health workers by 7% annually so as to
strengthen the capacity of human resource for health to deliver health
services effectively and
efficiently.

Under objective 2, there are ten activities dealing with health human resource development and strengthening. As indicated in Table 7, activities number 1-3 dealing with training of middle level health professionals has been 100 percent implemented. From the period 2010 to 2014, the three zonal training institutions of Barentu, Ghindae and Mendefera a *total of 1181 health workers, of which 60 percent are women, were trained.* Of the total trained, Mendefera Training Center accounted for 41 percent, while Ghindae and Barentu trained 31 percent and 28 percent, respectively. This appears to be fair and equitable considering the number of HFs and population of the respective zobas (Table 5). At the central level, the Asmara nursing school was also supported.

GAVI/HSS's grant fund complemented other funds (Global Fund) to strengthen the training institutions. For example, for the Mendefera training centre, GAVI/HSS grant fund was utilised to construct drainage and sewerage system, and to furnish and equip the kitchen with cooking utensils and oven and related accessories. Furthermore, the MOH used GAVI/HSS grant fund to cover DSA and other expenses, for all

the trainees from the three centres, while doing their practical training and internship in hospitals and HCs throughout the country.

Overall, the three training centres have performed more than the planned target therefore a 100 percent achievement score has been given (Table 7).

School	School			Total
Year	Barentu	Ghindae	Mendefera	
2010/11	103 (29.4 %)	84 (24.0 %)	163 (46.8 %)	350
2011/12	96 (29.4 %)	116 (35.6 %)	114 (35.0 %)	326
2012/13	64 (23.8 %)	96 (35.7 %)	109 (40.5 %)	269
2013/14	68 (28.8 %)	70 (29.7 %)	98 (41.5 %)	236
Total	331 (28.8 %)	366 (31.0%)	484 (41.0 %)	1181

Source: HRD/MOH & respective training centres, 2015

One of the activities of objective 2 was to train instructors so that they upgrade their knowledge and skills. Reports from the HRD Department reveals that a total of 19 instructors were trained of which 3 were awarded Masters Degree, 13 Bachelors and 3 Post graduate Certificate. 12 instructors (9 Bachelors Degree and 3 Certificate) earned their credentials from the Republic of China. The rest 7 (3 Master and 4 bachelors) learned through distance learning mode sponsored by the Asmara College of Health Sciences (Table 8).

Degrees/Mode of learning	Total			
	Barentu	Ghindae	Mendefera	Total
1) Bachelors				
Distance learning	3	4	2	9
On site learning	0	2	2	4
2) Post graduate Certificate	1	1	1	3
3) Masters	1	1	1	3
Total	5	8	6	19

Source: HRD/MOH, 2015

During the preparation stage of the GAVI/HSS Grant Fund document, 40 percent of all the HFs in the country had fulfilled the MOH staffing norm. Through the support of GAVI/HSS grant fund, it was planned to raise this figure to 60 percent. According to MOH/Administration and Finance Department Assessment Report, 34 percent are estimated to have fulfilled the staffing norm, amounting to 26 percent less than the planned target and even 6 percent less that the baseline value (Table 9). According to the key informants, part of the reason could be the inadequate incentive and motivation health staffs get. To

confront this challenge, they suggest that the MOH should train and recruit more health workers at a rate that matches the number who left.

Zoba	Number of HFs	Number of HS with at least 60% of staff filled	Percent of HF with 60% of staff filled
Anseba	35	6	17
Gash Barka	79	17	22
Debub	75	26	35
Maekel	45	31	69
SKB	58	19	33
DKB	16	4	25
Ref Hosp.	4	3	75
Total	312	106	34

Source: MOH, Administration and Finance Department, 2015

With regards to the planned provision of recreational amenities for health workers the items have been procured but not yet distributed to the identified HFs. When the identification and selection process is completed (which will be reportedly finalised by the end of this year), the motivational package to best performing facilities will be distributed., Zobas Maekel and Anseba have awarded some workers using funds from GAVI/HSS and other donors.

Table 10: GAVI/HSS grant fund support to H	Iuman resource development and strengthening
Tuble Tot off (21100 Brand Support to 12	aman resource actorphicene and serengeneering

No.	Description of Implemented Activities (2010-2015)	Results Achieved	Source	Result score
1.	Strengthen existing central and zonal training institutions to produce middle level health professionals	The three zonal training institutions have received GAVI/HSS grant fund and were able to produce a total of 1181 middle level health professionals (60% females) from the period 2010 to 2014.	HRD/M OH, 2015	100%
2.	Upgrade the technical capacity of training school tutors / instructors by training them in areas of identified skill deficits through: distance education post graduate and other relevant courses	GAVI/HSS grant fund was complementing other funds in the implementation of this activity. In total 19 staff have upgraded their skill and knowledge of which 3 earned MA, 13 BA and 3 post graduate certificates.	HRD/M OH, 2015	80%
3.	Support to zonal training institutions with requisite teaching materials that includes audio visual materials books computers, etc	Activity completed in May 2015	PMU/M OH 2015	100%
4.	Review the current staffing pattern in order to establish the MOH Recommended Minimum Staffing Norm for health facilities at all levels	This activity is at a draft stage.	HRD/M OH	25%
5.	Update the existing job descriptions of health workers at all levels of the health system.	Completed in 2010	HRD/M OH	100%
6.	Disseminate the existing job descriptions of health workers to all	Completed in 2013	HRD/M OH	100%

No.	Description of Implemented Activities (2010-2015)	Results Achieved	Source	Result score
	levels of the health system			
7.	Develop health workers transfer policy and guidelines	This activity remains at 75% completion. Its final accomplishments been dependent on other national policies such as the civil service pay structure.	Human Resourc es Manage ment Divisio n	75%
8.	Provide recreational amenities for health workers working in 10 selected remote health facilities	The amenities have been procured, however distribution to final destination (HFs) has not yet been finalized. Will be completed by December 2015.	PMU/M OH, 2015	100%
9.	Introduce reward package system to best performing individual health workers and teams at national and Zonal levels	GAVI/HSS grant fund was supplementing other donors' fund. Zoba Health Offices reportedly do give package of rewards. To which facility and/or individual could not be determined. However, Zobas Anseba and Maekel have rewarded their best performing staff using GAVI HSS and other funds.	HRD/M OH	45%

Source: GAVI/HSS End of Project Evaluation, 2015

<u>Objective 3:</u> To establish functional participatory management structures at all levels of the health system

The third objective of the GAVI/HSS grant fund was to strengthen the heath system by establishing functional and participatory management system at all levels of the administrative structure. As indicated In Table 11, the scaling up of Health Management Committees to three zobas and 29 sub-zobas has taken place and Kebabib Health Committees have been established in 350 Kebabis. Training on their duties and responsibilities has been given for all KHC established in 350 kebebis and for 120 health management teams. The prepared training manuals, guidelines and the job description document were used as resources material during the training. Overall, remarkable result has been achieved in implementing this objective.

Objective three also considers the establishment of community based HMIS that would generate information on infant death, child and maternal deaths, registration of births and deaths, disease surveillance data, and other relevant community health information. The evaluation could not find much substantive evidence as to the efforts made in this regard.

No.	Description of Implemented Activities (2010-2015)	Results Achieved	Source	Result score
1)	Scaling health management committees in 3 zobas (regions) and 29 sub-zobas (districts)	completed in 2011	Policy &Planning Division	100%
2)	Train health management committees in 3 zobas	completed in	Policy&	100%

No.	Description of Implemented Activities (2010-2015)	Results Achieved	Source	Result score
	(regions) and 29 sub-zobas (districts) on their roles and responsibilities	2013	Planning Division	
3)	Establish KHC at 350 kebabis	completed in 2011	Policy & Planning Division	100%
4)	Train KHC in 350 kebabis on their roles and Responsibilities	completed in 2013	Policy & Planning Division	100%
5)	Provide one week training to 120 health management team members in 3 zobas on research district health systems mgt data mgt and community entry and participation	completed in 2013	Policy & Planning Division	100%

Source: GAVI/HSS End of Project Evaluation, 2015

Objective 4: To strengthen Results Based Management (RBM) of health services to reflect strong evidence based decision making at all levels of the health system

The overall strategy for strengthening M&E in the health system through this Grant Fund is enshrined in the strengthening of RBM, which is a proven way of establishing strategic directions for achievement of population level health outcome from health interventions. M&E is an inherent component of RBM.

This evaluation report merged the eight activities of objective four (4) into the following four (4) main activities and analysed them accordingly: (i) provision of training to senior and middle level health managers in RBM skills, strategic planning and management, and M&E; (ii) identification of core minimum national indicators; (iii) production and distribution of quarterly HMIS bulletin, and the provision of ICT equipment and training in ICT in data management skills; and (iv) scale-up district health systems assessment from the already piloted two zobas to cover the remaining four (Table 8).

RBM is an output, outcome and impact oriented management of health services that enhances the functionality and performance of health systems. The components of RBM which are: strategic planning and strategic management, M&E, and optimal quality HMIS for evidence based-decision making. In this regard, the evaluation found out that the Division of Research and Resource Centre in conjunction with the M&E and Training Division delivered training in two rounds- RBM 1 and RBM 2.

The RBM 1 was delivered, between 2010-2014, to a total of 350 senior and middle level health managers and health personnel from the six zobas and sub-zobas. It dealt with RBM skills specifically in strategic planning and management, M&E skills and report writing. The target trainees in the RBM 2 were 170 senior and middle level health managers who came from the six zobas, national referral hospitals and MOH HQ. In RBM 2, the two weeks training dealt with HMIS manual and computerized data management systems training, building skills and competencies in HMIS data management, HMIS data transformation into information for operational health system research and making evidence based decisions for health action. The two rounds of training were from the budgetary allocation of 2011-2013 of GAVI/HSS and other partners. The end result of the training in RBM and operational research was to monitor the outcome/impact and the output indicators analysed in section 7.2 and 7.3 through valid and reliable data provided by operational researches scattered throughout the five years life time of this Grant Fund. The concerned departments of the MOH were to assume responsibility for overall coordination in this effort.

GAVI/HSS funded training in research capacity to senior and middle level professionals involved conducting operational research in priority health system/services areas to make informed health management decisions as well as contribute to health policy formulations. To this end, training in 3 operational research skill enhancement have been given under RBM 2: (i) training in data management; (ii) transformation of data into information; and (iii) conducting research and making decision.

Nonetheless, according to the opinion of the key informants, regular operational research was not conducted nor was regular feedback given to the concerned departments of the MOH for informed health management decisions and contribution to health policy formulations. The main constraints for not doing so include the reported lack of adequate time to conduct the research, write the results and approve it in a consensus meeting. Nonetheless, improving the research capacity of health workers should be considered as an objective in future GAVI/HSS application process and development.

Against these constraints, this evaluation did not find tangible evidence that the training in RBM and research has been streamlined into the operational management of the health system at all levels of the health system structure. However, the knowledge gained and the skills acquired have created full awareness as to the utility of RBM and research by all senior and middle level health professionals. To reiterate, vital knowledge base has been created and the instrument or approach have been setup for concrete action once the ideal condition is created to undertake operational research for efficient health system delivery.

With the goal of identifying core national indicators a consensus workshop in which 79 participants attended was held in April 2011. This workshop reportedly selected 157 comprehensive indicators. However, the planned participatory consensus building workshop to identify core minimum national indicators did not take place. According to the key informants discussed with, this activity will be accomplished sometimes in the future.

The procurement of ICT equipment for computerization of HMIS system was completed. Computer hard ware and systems including printers, broad band internet services were installed in 29 selected sub-zobas. Staffs of beneficiary HFs have been trained in data management skills.

No.	Description of Implemented Activities (2010-2015)	Results achieved	Source	Results Score
1)	 Provision of one week training in RBM skills- Strategic Planning and Management M&E skills and report writing skills; Provision of one week training in RBM skills-2 - HMIS data management & transformation useful for undertaking operational health system research and making evidence based decisions. 	 almost 350 senior and middle level managers and health facility personnel at Zoba and sub-zoba level. 1970 participants who came from 6 zobas, national referral hospitals and head quarter attended in HMIS manual and computerized data management systems training. The above were funded from GAVI/HSS grant fund and other funds from other donors from 2011-2013. 	Research and Resource Centre Division; M&E Unit	100%
2)	Support the identification of core minimum national indicators by sponsoring a	of which were the core minimum indicators,	HMIS	50%

Table 12. Training in ICT	Feauinment to facilitate	RBM for making decisions	s at the local level
Table 12. Training in ICI	equipment to facilitate	KDWI IOI making uccisions	at the local level

No.	Description of Implemented Activities (2010-2015)	ented Results achieved		Results Score
	participatory consensus building workshop	participants attending the workshop selected 157 comprehensive indicators. The plan is to identify core indicators from these comprehensive indicators. Sometime in the future.		
3)	Support the production and distribution of quarterly HMIS bulletin; procure ICT and train health workers in ICT and computerized data management skills relevant for operating computerized HMIS.	distributed; The fund was used for HMIS data collection guideline disseminated to all HFs facilities 2011 & 2014;	HMIS/M OH	75%
4)	Scale-up district health systems assessment from the already piloted two zobas to cover the remaining four zobas	This was completed in 2014 and health system assessment was conducted in all the six zobas.	Planning and Policy Division	100%

Source: GAVI/HSS End of Project Evaluation, 2015

Objective 5: To rehabilitate health facility infrastructure for provision of quality health services

Objective 5 is planned to support the rehabilitation of health facility infrastructure which would assist in the provision of quality service in selected HFs. The activities under this objective include: (i) the provision of water supply; (ii) supply of photo voltaic solar power and batteries; (iii) training of cold chain technicians in six zobas; (iv) constructing incinerators and placenta pits; (v) upgrading three (3) health centres to the level of community hospitals (sub-zoba/district hospitals); and (vi) construct accommodation for health workers in selected three (3) remote HFs.

Due to inadequate funding and economies of scale, the funds allocated for the supply of water has been allocated for the supply of photo voltaic solar power and batteries; and the construction of accommodation for health workers was merged with upgrading of HFs to community/sub-zoba hospitals. Photo voltaic solar power and solar batteries were procured and distributed to selected HFs in the six zobas as indicated in Table 13 (refer also to the table in annex 3 for the list of names of HFs). The fact that Gash Barka received the lion's share of solar panels and batteries appears to be fair considering the number of HFs and the remoteness of the facilities. The ultimate objective of strengthening the cold chain system has been met by the supply of solar power and batteries.

According to the Environmental Health Unit, GAVI/HSS grant fund was found to be inadequate to procure 10 incinerators. Nonetheless, incinerators were procured and erected in five (5) HFs of Asseb, Massawa, Barentu, Keren and Agordat Hospitals using from funds of other development partners. HAVI/HSS grant fund was utilised for covering expenses related with transport and logistics and installation.

With regards to the construction of placenta pits, the plan was to construct placenta pits in 10 HFs. According to the Environmental Health Unit only the pits in Amatere MCH hospital (Massawa) and Elabered Community Hospital in Anseba were constructed using GAVI/HSS fund. Through the

coordination of the Community Health Management Committee, about 30 other placenta pits were constructed in different HFs.



Figure 2: Solar Panel in Barentu Regional Referral Hospital



Figure 3: Solar Batteries in Debarewa Community Hospital

Zoba	Number of HFs that benefited		
Zoba	Solar Panels	Batteries	
Maekel	5	24	
Gash Barka	6	108	
Anseba	3	60	
Debub	5	36	
SKB	5	36	
DKB	4	36	
Total	26	300	

Source: PMU/MOH, 2015

The EPI unit revealed that two rounds of training of trainers (TOTs) for two technicians was carried by 2014, who in turn trained others cold chain management and maintenance in all the six zobas. Two technicians from each zoba were also trained in electrical and bio-medical fields. The cold chain facilities are reportedly working well following the installation of solar power units and the supply of solar batteries in the HFs indicated in Table 11 above.

GAVI/HSS grant fund was partially utilised in complementarity to other donors' fund for cold chain management and training on the new vaccine. According to the EPI Unit, the cohort allocation from GAVI/HSS grant fund has contributed to the smooth implementation of the EPI program, and has proved to be effective even after the reprogramming exercise.

Activity six, which deals with upgrading of HCs to community hospitals, has been fully implemented. The upgraded HFs are Awha in Debub zoba, Afabet in SKB and Tio in SKB. All are located in remote and previously forgotten communities. Other three HFs that have been upgraded and rehabilitated through GAVI/HSS fund include: Embatkala, Agordat hospital emergency room and Keren hospital emergency room. All these activities were completed in 2014.

Construction of accommodation for health workers in selected 3 remote HFs will be completed in December 2015. The HFs are in three remote coast communities of Rhaita and Aseb in DKB, and in Agamit in SKB.

No.	Description of Implemented Activities (2010-2015)	Results achieved	Source	Results Score
1)	Provide water supply in selected health facilities	Due to inadequate funding this activity was reprogrammed and merged with activity 5.2.	Environmental Health Unit, 2015	50%
2)	Supply photo voltaic solar power and cold chain system to selected health facilities	Solar panels and batteries were procured and installed (see Table 9 above).	PMU/MOH, 2015	100%
3)	Conduct training for cold chain technicians in six zobas	Two TOTs were trained, who in turn trained others in the six zobas. This was completed fully in 2014		100%
4)	Construct incinerators in 10 health facilities		Environmental Health Unit, 2015	100%
5)	Construct placenta pits in 10 health facilities	Placenta Pits constructed by GAVI support in were in Amatere MCH hospital and Elabered Community hospital. Around 30 other placenta pits were constructed by the communities in different HFs.	Environmental Health Unit, 2015	100%
6)	Upgrade 3 health centres to the level of community hospitals (district hospitals); and construction of accommodation for health workers in selected 3 remote HFs.	 Three HCs were upgraded to Community Hospitals (Awha, Afabet and Tio. Other three HFs Embatkala HC, Agordat hospital and the emergency room of Keren hospital were rehabilitated and upgraded. Construction of accommodation for health workers in selected 3 remote HFs will be completed in 2014 	HCSD	100%

Source: End of Project Evaluation, 2015

Objective 6: To improve delivery of essential health care packages including provision of integrated maternal and child health (MCH) services, at all levels of health care provision

In objective 6, quite a lot of reprogramming have been made resulting in the following changes in the activities:

i) The fund allocated to train KebabiKebabi Health Committees, Health Facility Management Committees (HFMC) and teachers in early detection and response to outbreak of vaccine preventable diseases (in activity 1), was reprogrammed for carrying out community health education and promotion in four of the six zones in the country under activity 6.9 and 6.10.

ii) Activity 2 - carry out household based water quality control in all the six Zobas during both rainy and dry seasons – was reprogrammed and combined with activity 6.3.

Training of health workers, KHCs, HFMCs & Teachers was implemented in 2011. The strategy that was followed was to train 60 focal persons from each of the three sub-zobas in SKB and DKB. These are sub-zobas that are located in remote coastal communities. The 60 focal persons were trained in early detection and response to outbreak of vaccine preventable diseases (Table 15). The training was jointly funded by GAVI/HSS and other organisations.

With regards to activity 2, 'carrying out of supply of chemicals and reagents (e.g. PUR Water guard, etc) for water quality control in all the six zobas)', during both rainy and dry seasons, the Environmental Health Division, confirmed that the chemicals were procured by PHARMICOR and distributed to HFs, and the reagents (submitted to the Division of the National Health Laboratory).

According to the data of the HMIS, during the period 2010-2014, 11,348 visits were conducted with regards to the '*Integrated Outreach services*', which involved child vaccination, growth monitoring and other MCH services. In a related report, the HMIS revealed that during the same period, around 2,074 supportive supervision visits were made – a figure which could be higher since there are many unreported cases.

The Division of Policy and Planning of the MOH saw the completion of the Referral and Emergency Policy and Implementation Framework document. This evaluation confirmed that it has been distributed to hospitals and HFs. However, the plan to improve the referral system and the training in triage and emergency management including referral of patients using the Emergency & Referral Manual was reprogrammed and the fund used to supplement the procurement of standard equipment and supplies for referral & emergency service in selected HFs.

One of the major accomplishments under activity six is the provision of emergency medical equipment to selected hospitals that provide mother and child health services. The provision of solar gadgets including batteries and spare parts for pre-existing solar equipment have enabled the facilities to adequately help the cold chains system keep up and running. At the same time, provision of solar light created conducive work environment for health workers which reportedly helped minimise staff drop-out from work.

In general, therefore, all the activities under objective 6 have been successfully implemented, and the evaluation has given a 100 percent score value to this objective.

No.	Description of Implemented Activities (2010-2015)	Results achieved	Source	Resul ts Score
1)	Train health workers in early detection and response to outbreak of vaccine preventable diseases; and train communities (VHTs, HFMCs & Teachers) in early detection and response to outbreak of vaccine preventable diseases	and teachers, 60 focal persons	HMIS, 2015	100%
2)	• Supply chemicals and reagents (e.g. PUR Water guard, etc) for water quality control in all the six zobas	The chemicals (distributed to HFs) and reagents (distributed to Department of the National Health Laboratory) were purchased by PHARMICOR and	Environmental Health Division, 2015	100%

Table 15: Delivery of essential health packages including MCH services at all levels

No.	DescriptionofImplementedActivities(2010-2015)	Results achieved	Source	Resul ts Score
	• Carry out household based water quality control in all the six Zobas during both rainy and dry seasons (original 6.2)	distributed to all health facilities and Food and beverage laboratory Department of the National Health Laboratory.		
3)	Conduct integrated outreach services	Integrated services involve outreach child vaccination, growth monitoring and other MCH services. In the year 2010-2014, 11,348 visits were conducted	HMIS, 2015	
4)	Develop the Referral and Emergency Policy and Implementation Framework	completed in 2011	Policy& Planning Division,	100%
5)	Improve referral system through training in triage and emergency management including referral of patients/clients (using the Emergency & Referral manual	This activity was reprogrammed and the remaining fund was combined to accomplish activity 6.7	Policy& Planning Division,	
6)	Procure standard equipment and supplies for referral & emergency service provision at selected health facilities	Activity successfully carried out	PMU/MOH	100%
7)	Carry out regular integrated supportive supervisions	Between 2010 and 2014, the HMIS estimated that 11,348 supportive integrated supervision visits were made.	HMIS, 2015	100%

Source: End of Project Evaluation, 2015

9. Monitoring and Evaluation (M&E)

Throughout the life time of the Grant Fund, the Coordination Office on behalf of the HSCC has been active in following implementation of activities, compiling progress reports and conducting stakeholders' meetings. There was a continuous monitoring and periodic evaluation of the project. Besides, the PMU/MOH took care of financial management and communications responsibilities with GAVI/HSS HQs. Implementing bodies at the zoba levels submitted monitoring reports to the HSCC, which in turn prepared the quarterly and annual Joint Reports (JAR) to GAVI/HSS. This arrangement remained unchanged till the writing of this evaluation report.

There appears to be little coordination or integration of data and information from the health system in general and the immunisation program in particular. The situation could be rectified if genuine efforts are taken to integrate or systematise information and data exchange between the National Statistics Office and the HMIS. Technical assistance need to be provided by development partners if this is to be realised.

This evaluation concurs with the reports of JAR 2015, which maintain that there is no problem with the indicators already in use for GAVI/HSS output, outcome/impact and funds reporting. They are compatible with the MOH's data need and control. However, the present system of reporting and utilization of data for planning and decision making by Kebabi communities for programs focusing on children from vulnerable families is unsatisfactory. Therefore, to promote efficiency and gain economies of scale, grassroots level reporting and utilization of data for planning need to be strengthened both technically and financially.

Annexes - 1

Reference Documents

- 1. GOE, MOH, National Health Policy, 2010-2014
- 2. GoS, MOH, National Health Sector Development Strategic Plan, 2010-2014
- 3. MOH, Application For GAVI Alliance Health System Strengthening (HSS) Grant, 2009
- 4. MOH, GAVI/HSS, Annual Joint Progress Reports 2012
- 5. MOH, GAVI/HSS, Annual Joint Progress Reports 2013
- 6. MOH, GAVI/HSS, Annual Joint Progress Reports 2014
- 7. MOH, GAVI/HSS, Joint appraisal report, April, 2015
- 8. MOH, GAVI/HSS, Joint appraisal report, April, 2014
- 9. M OH, EPI Program, National EPI Coverage Survey, Asmara, Eritrea 15 May, 2013
- 10. MOH, HRD/Division of Policy and Planning, HMIS Training Manual
- 11. Health Systems Research Training Manual
- 12. Management of Zoba Health Systems Training Manual
- 13. Community Entry and Partnership Training Manual
- 14. Hospital Health Team Guidelines
- 15. Zoba, -Sub-Zoba and Kebabi Health Management Committee Guidelines
- 16. Hospital Guidelines for Management of Common Medical Emergencies
- 17. Job Descriptions of Health Management Committees document
- 18. Health Centers Guidelines for Management of Common Medical Emergencies
- 19. District Heath Systems Assessment
- 20. Referral Systems Assessment
- 21. Emergency Services Assessment

Annexes - 2

List of Documents, Manuals and Guidelines Disseminated to Zobas

	Documents	Zobas visited and distribution verified			
		Debub	Gash Barka	Anseba	
i)	Documents:National Health PolicyThe Health Sector Strategy Development Program	$\sqrt[]{}$	$\sqrt[n]{\sqrt{1}}$	$\sqrt[n]{\sqrt{1}}$	
ii)	 Training Manuals HMIS Training Manual 				
	Health Systems Research Training Manual		\checkmark		
	Management of Zoba Health Systems Training Manual	N			
	Community Entry and Partnership Training Manual		\checkmark		
iii)	Guidelines Management Guidelines 	V	\checkmark		
iv)	Management Committees		\checkmark		
	Zoba Health Management Committee Guideline				
	• S.Zoba Health Management Committee Guideline				
	Kebabi Health Management Committee Guideline		\checkmark		
v)	Hospital Guidelines FOR Management of Common Medical Emergencies	V	\checkmark	\checkmark	
vi)	Job Descriptions of Health Management Committees document				
vii)	Health Centers Guidelines for Management of Common Medical Emergencies		\checkmark		
viii	 Assessments documents District Heath Systems Assessment Referral Systems Assessment Emergency Services Assessment 	$\frac{1}{\sqrt{2}}$		$\sqrt[]{}$	

Annex 3

Composition and Function of Health Management Teams and Committees

1.0. Health Management Teams

Health management teams are internal technical teams made up of heads of various divisions or units of the MOH at the various levels. They oversee the management of the whole system at the particular level. Their main purpose is to ensure effectiveness and efficiency of the health service delivery.

1.1. Zoba Health Management Team

Composition of the team

- The Zoba Medical Officer
- The Zoba Health Administrative officer
- The Medical Director of the Zoba Referral Hospital
- Heads of all programs at the zoba level
- TB/HIV Coordinator
- Malaria Control Coordinator
- Health Promotion officer
- HMIS Coordinator
- Nutrition Focal person etc....

Functions of the Health Management Team

- Provision of secondary level services.
- Provision of technical support of sub- Zoba / Primary level service.
- Conducting supervision, monitoring and evaluation of health service within the zoba
- Conducting operational research relevant to the Zoba.
- Interpreting policies into actions and recommending policy changes.
- Developing Zoba health plan based on the sector strategic plan.
- Mobilizing resources for the health sector at Zoba level.
- Coordinating health activities at Zoba level.
- Enhancing multi- sectoral cooperation and collaboration at Zoba level.

1.2. Subzoba Health Management Team

Composition of the Subzoba Health Management Team

- The sub-zoba head of health services
- The Primary Health care Coordinator
- Finance and administrative officer
- Clinical service Head
- Environmental health officer
- HMIS officer
- Heads of other nearby health facility with-in the sub-zoba

Functions Sub-zoba Health Management Team

- Developing sub-zoba health plan based on the sector strategic plan
- Mobilizing communities for enhanced implementation of all health activities
- Manage stores, supplies (including drugs and dressing), and equipment

- Provision of health services at primary level, which includes community hospital, health centers, health stations, and community level services
- Coordination, supportive supervision, monitoring and inspection of all health facilities and activities in the sub-zoba
- Manage health infrastructural development in the sub-zoba
- Promote inter-sectoral coordination for health activities by liaising with the sub-zoba administration.

2.0. Hospital Health Management Team

Composition Hospital Health Management Team

- Medical Director
- Hospital Administrator
- Matron of the hospital
- Representatives of various units:-
 - Wards
 - Theatre
 - Pharmacy
 - Diagnostic Services
 - Support Services
 - Blood Transfusion Services

Functions Hospital Health Management Team

- Planning, budgeting, and financial administration for the running and development of the hospital.
- Securing, planning and distribution of resources to the various units of the hospital.
- Ensuring the provision of high quality health services within and outside of the hospital.
- Coordination, supportive supervision, monitoring and inspection of all units within the hospital.
- Formation of all necessary sub- teams within the hospital.
- Management of staff in the hospital.
- Organization clinical and mortality audits.

3.0. Health Management Committee

Health management committees are management and advocacy structures that are supposed to exist at all levels of the health system to provide management and advisory support.

3.1. Zoba Health Management Committee

Composition of the Zoba Health Management Committee

- The Zoba Governor (or his/her representative).
- One other member of the Zoba Administration
- The Zoba Medical Officer- shall be the secretary to the committee.
- 2 other senior representatives of the Zoba Health Management team. (The medical officer of the Zoba referral hospital and one other member).
- Representation from the private sector, (religious organizations and Rural Drug Vendors).
- Non- Governmental organizations (e.g. Local and International Organizations such as the National Red Cross.)

- Representation from Ministry of Agriculture.
- Representation from Ministry of Education.
- Representation from Ministry of Labor and Human Welfare.
- Representation from PFDJ
- Representation from National unions such as NUEW, NUEY.

Functions of the Zoba Health Management Committee

- Promote decentralized decision making on health issues in the Zoba.
- Approve and support proposals and programs on health issues in the Zoba.
- Promote integrated health planning in the Zoba Health Services.
- To ensure community participation in planning, implementing and evaluating health related programs.
- To ensure inter- sectoral coordination in issues like management of epidemics, disaster preparedness and response, voluntary blood donation and environmental management.

3.2. Sub-zoba Health Management Committee

Composition of the Subzoba Health Management Committee

- The Sub Zoba administrator.
- Two other members of the sub zoba administration(1 social services manager or administrator deputy)
- Senior representatives of the sub zoba health management team. One of these shall be the secretary to the committee (2 H/F representatives, 1 Sub Zonal health facility head and another 1 staff will be represented
- A representatives from the traditional rulers (you need to put into account gender, religion and ethnicity representation is well taken care of).
- A representative of the traditional healers.
- Representation from the private sector, (Rural Drug Vendors).
- Nongovernmental organs egg. Local and International organizations such as Red Cross.
- Ministry of Agriculture.
- Ministry of Labor and Human welfare.
- Ministry of Education.
- PFDJ
- National unions such as NUEW, NUEYS
- Local assemblies (Baitos)

Functions of the Subzoba Health Management Committee

- Oversee the functional management of SZHMT.
- Fund or revenue generation to support health service deliveries at sub- Zoba level.
- Liaison with sub- Zoba political and traditional administrative set up and other organs to promote decentralized making.
- Make regular reports on sub-zoba health services (including coverage graphs, maps, and statistics) available to the sub- Zoba Administration set-up.
- Present proposals and programmes to the sub- zoba Administration for approval and support.
- Promote the image of the SZHMT, provide feedback and coordinate the involvement of the community and to help solve problems of the institution relating to the community.
- Establish regular meeting with influential sub-Zoba groups and bodies eg. To discuss health problems.

- To help raise public health awareness in early detection, reporting and controlling epidemics. I.e. assist in the formation of bodies that will address specific health issues in the sub- zoba. Egg Sub Zoba Emergency committee, blood donation groups.
- To mobilize and organize community in environmental sanitation activities.
- To ensure community participation in planning, implementing and evaluating health related programs.

4.0. Hospital Health Management Committee

Composition of the Hospital Health Management committee

- At least five prominent (and locally resident) members of the communities in the catchment area of the hospital (Local Administrator, PFDJ,MOE,NUEYS,NUEW etc...)
- Two senior representatives of the hospital management team(i.e., Hospital Director and Administrator)
- Two representatives from the community opinion winners, and
- Representatives of the four religious groups

Functions of the Hospital Health Management committee

- Monitor and control financial management of the hospital
- Promote the image of the hospital
- Provide feedback and coordinate the involvement of the community and to help solve problems of the institution relating to the community
- Liaise with the political and traditional administrative set-up by making regular reports on the hospital and presenting proposals for the development to them.
- Mobilize resources for the development of the hospital
- Regularly monitor and evaluate planned activities of the committee
- Audit the mechanism of the hospital management

Annex 4

Distribution of Solar Panels and Solar Batteries

Zoba		Health facility (HFs)	No.	Health (HFs)Facility	Number of Batteries
	1.	BeitMekae/Villago Com. Hosp.	1.	Edget HF	
	2.	Hazhaz Community Hosp.	2.	Serejeka HF	
Maekel	3.	Godaif Community Hosp.			24
	4.	Acria HC			
	5.	Sembel hosp.1			
	1.	Barentu zonal ref. Hosp. OR	1.	Tessenei HF	
	2.	Barentu zonal ref. hosp.Delivery Ward)	2.	Agordat hosp.	
Gash	3.	Barentu referral hosp.	3.	Barentu hosp.	
Barka	4.	Tokombia Community Hosp.	4.	Sawa HF	108
	5.	Omhager HF	5.	Mensura HC	
	6.	Mensura HF	6.	Tokombia HC	
			7.	Goluj HF	
	1.	Keren zonal referral hosp.	1.	Himbol HF	
	2.	Asmat HC	2.	Asmat HF	
Anseba	3.	Geleb HC	3.	Kerkebet HF	- 60
Zone			4.	Aretai HF	00
			5.	Habero HF	
			6.	Keren hosp.	
	1.	Dbarwa comm. hosp.	1.	Mendefera HF	- 36
	2.	Maiaini comm hosp.	2.	Adi keih HF	
Debub zone	3.	Fikiachekemte com. hosp.			
	4.	Tsorona HC			
	5.	Maimne comm. hosp.			
	1.	Amatere MCH	1.	Maihmet HF	
Norhtern	2.	Afabet comm. hosp.	2.	Nakfa HF	
Red	3.	Adobha Comm. hosp.	3.	Gelalo HF	36
Sea(N/R/S)	4.	Shieb HC			
	5.	Bada HF			
Southern	1.	Wade HF	1.	Tio hosp	
Red Sea	2.	Afambo HF	2.	Assab hosp.	36
(S/R/S)	3.	Assab MCH Center	3.	Assab MOH	
(6/11/6)	4.	Assab referral hosp.			

Source: End of Project Evaluation GAVI/HSS, 2015Note:GAVI/HSS grant fund served as a complementary fund with other donors' financial input

Annex 5

Person Interviewed

No.	Name	Position	Zoba
1.	Andom Ogbamariam	D/G, Policy, Planning and HRD	MOH/HQ
2.	Tewelde Yohannes	Director, Policy and Planning-	MOH/HQ
3.	Goitom Mebrahtu	Director, HCSD	MOH/HQ
4.	Eyob Tekle	Director-PMU/MOH	MOH/HQ
5.	Tsehaye Tsegay	Grant Fund Coordinator, PMU/MOH	MOH/HQ
6.	Tibletse Fissehaye	Grant Fund Senior Accountant	MOH/HQ
7.	Berhane Debru	Director, Research and Resources Center	MOH/HQ
8.	Samuel Goitom	HMIS	MOH/HQ
9.	Amanuel Kifle	Head of, HMIS	MOH/HQ
10.	Teodros Yihdego	Head of EPI Unit	MOH/HQ
11.	TeclemariamAmare	Head of Emergency Management Unit	MOH/HQ
12.	Tekie Abraha	Head, Environmental Health Unit	MOH/HQ
13.	Isaias Araya	Director, Admin. & Finance –	DebubMOH
14.	Yosief Zemicael	Head, Continuing Education Unit	Debub/MOH
15.	Solomon Ghirmai	Manager, Zoba PMU	Debub/MOH
16.	Luul BantYirga	Zoba Medical Officer	GB/MOH
17.	Tadesse Kelati	Manager, Zoba PMU	GB/MOH
18.	Keseteberhan Selomon	Zoba Medical Officer	Anseba/MOH
19.	Tesfalem Misghina	Head, Health Promotion Unit	Anseba/MOH
20.	Alganesh Andemariam	Manager, Zoba PMU	Anseba/MOH
21.	Yemane Haile	Zonal Health Officer	Debub/MOH
22.	Yohannes Tekeste	Zoba Medical Officer	SKB/MOH
23.	Werede A/Micael	Manager, Zoba PMU	SKB/MOH
24.	Semere Gebregiorghis	Managerial Policies for National Program Officer	WHO