Implementing Best Practice Measles SIAs

The Ethiopia Experience

May 2011

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Acknowledgements

The Federal Ministry of Health extends its sincere gratitude to the President of the Federal Democratic Republic of Ethiopia, HE Ato Girma Woldegiorgis, for his support and personal involvement in the 2010-2011 national integrated measles supplemental immunization campaign.

Several individuals, organizations, local and international partners supported the successful implementation of the SIAs. The participation of the political leadership and the local administration at all levels, including the Regional Presidents, as well as traditional and religious leaders, in the mobilization of different sectors and the community was highly commendable and appreciated, and contributed significantly to the large turn-out of the community during the vaccination activities. We thank the Ministry of Education for the key role played in mobilization of school children through the Regional and Zonal Education Offices. In addition, we acknowledge the support from other sectors such as Agriculture, who assisted in provision of logistical and transport support at Zonal and Woreda level. The Government print and *electronic* media played their part well in dissemination of information about the activities, making it possible to reach even more people.

We are sincerely grateful for the human, financial, technical and material support provided by partners at different levels such as the Measles Initiative (UN Foundation, WHO, UNICEF, Bill and Melinda Gates Foundation, CDC, American Red Cross, and others), CORE GROUP, JSI/ L-10K, International Family Health Partnership (IFHP), Lions Club International and Rotary International, among others. The financial support provided from the Global Polio Eradication Programme and Nutrition Partners for the integration of other child survival interventions during the measles follow up SIAs is highly appreciated.

The campaign could not have been possible without the participation of all health workers, health extension workers, community volunteers and mobilizers. Through their relentless efforts and commitment to the task, over 12 million children were reached with the integrated package of services. Finally, but more importantly, the overwhelming participation of communities in the campaign was a true depiction of their commitment and positive attitude towards achieving and maintaining the health of all the children of Ethiopia.

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Foreword

The Federal Ministry of Health initiated implementation of accelerated measles control strategies to reduce measles mortality in 2002. Since then, significant progress has been observed in reduction of cases and deaths due to measles. However, the gaps in population immunity at sub national level pose a major challenge to sustaining the gains in measles control. A further threat exists in possible importation of wild polio virus from neighboring countries in view of the continued circulation in the African Region.

As part of the measles pre-elimination plan for Ethiopia, the country successfully implemented a nationwide follow up campaign targeting all children between 9 months to 4 years of age in two phases during October 2010 and February 2011. The campaign set out to reach at least 95% of the target children. With the support of Government and non-Government organizations, political leaders, religious groups, the media, Education and other sectors, and several partners, 8.9 million children (106%) were vaccinated against measles and 12.8 million under-five children (97%) were vaccinated with polio vaccine. In addition, Vitamin A supplementation, deworming medicine and nutritional screening were provided.

I would like to express my sincere gratitude to all individuals, organizations, partners and the community who contributed their human, technical and financial resources towards the campaign. The campaign could not have achieved the level of success without your dedication and invaluable support provided.

I would further wish to extend our appreciation to the Measles Partnership for selecting Ethiopia in the African Region to demonstrate implementation of a measles SIA using a 'best practice approach'. The initiative provided an opportunity to strengthen the commitment and full participation at all levels. Several efforts were made to ensure quality at each stage of the preparations and implementation, within the available resources. Task Forces were established at each level for effective coordination and follow up of activities in a best practices approach. We believe this also contributed to the successes achieved and will provide a platform for strengthening the routine system further.

As Ethiopia moves towards measles pre-elimination by 2012, intensified efforts are required to ensure the targets are met including sustained high routine immunization coverage at kebele level. The Government will continue to bring health services closer to communities through the Health Extension Programme, to ensure increased accessibility to all areas; in addition continued efforts will be made to promote quality of service delivery and an efficient cold chain system in the country. I call on all stakeholders at all levels to continue to support these efforts to protect our children from vaccine preventable diseases in order to reduce child mortality and attain MDG 4 in Ethiopia by 2015.

Kesetebirhan Admasu (MD, MPH)
State Minister for Health

Official Remarks

"The Best practice measles campaign involved detailed planning that took into account lessons learned from previous campaigns to improve the quality of implementation. A desk review and site visits were done and a guideline developed addressing all aspects. Future investments in measles pre-elimination should contribute more towards strengthening the routine system with a greater focus on poor performers sub nationally in supportive supervision and capacity building to improve coverage. WHO will continue to support Government efforts to sustain the gains so far achieved."

Dr Fatoumata Nafo- Traoré,
WHO Representative, Ethiopia

"The 2010/2011 Measles SIAs reached over 90% of the children 9 - 47 months of age throughout the country. We have seen fewer Measles cases in 2011. We have learnt many important lessons that lead to successful SIAs such as good micro planning, logistics and supply systems, effective cold chain, communication through multiple channels and commitment of the government at all levels. Now we must ask how we can do even better. We need to improve the routine EPI programme through the Health Extension Programme and make sure our cold chain is robust. We must reach every single child no matter where he or she lives. We need to work with communities, religious leaders, local administration, health workers and media to make sure every parent and care taker knows the importance of immunization."

Mr Ted Chaiban
UNICEF Representative, Ethiopia

Abbreviations and Acronyms

AD	Auto Disable Syringe
AEFI	Adverse Events Following Immunization
ARV	Antiretroviral medications
BP	Best practices
CDC	US Centers for Disease Control
CSA	Central Statistics Authority
EPI	Expanded Programme on Immunization
EOS/TSF	Enhanced Outreach Services/Targeted food Supplementation
ERIA	Enhanced Routine Immunization Activities
FGD	Focus Group Discussion
FMOH	Federal Ministry of Health
HEP	Health Extension Programme
HEW	Health Extension Worker
HH	Household
HW	Health Worker
ICC	Interagency Co-coordinating Committee
ICM	Independent Coverage Monitor
IEC	Information, Education and Communication
IFHP	International Family Health Partnership
IPC	Inter personal communication
KAP	Knowledge, attitude and practice
L-10K	Last Ten Kilometers
MDGs	Millennium Development Goals
MUAC	Mid Upper Arm Circumference
NGO	Non-Governmental Organization
OPV	Oral Polio Vaccine
PFSA	Pharmaceutical Fund and Supply Agency
PHC	Primary health care
POA	Plan of Action
PTME	Planning, Training, Monitoring and Evaluation
RCM	Rapid Convenience Monitoring
RBOs	Religious Based Organizations
RED	Reaching Every District
RHB	Regional Health Bureau
SIAs	Supplementary Immunization Activities
SNNPR	Southern Nations, Nationalities and People's Region
TOT	Training of trainers
UNDP	United Nations Development Programme

UNICEF	United Nations Children's Education Fund
vCHWs	Volunteer Community Health Worker
VAD	Vitamin A deficiency
VVM	Vaccine Vial Monitor
WHO	World Health Organization
ZHD	Zonal Health Department

Executive Summary

As part of the Accelerated Measles Control Plan for Ethiopia, nationwide integrated follow up measles SIAs were planned for 2010-2011, targeting 7 Regions in October 2010 and 4 Regions in February 2011. The objective of the 2010-2011 integrated measles SIAs was to provide a supplemental dose of measles vaccine to at least 95% of children aged 9 months to 4 years; polio vaccine to all under-five children; vitamin A supplementation to all children 6-59 months of age; deworming medicine to children aged 24-59 months of age; and nutritional screening for under-five children, pregnant and lactating women. In addition, the SIAs set out to strengthen the routine immunization system using every opportunity in the preparations and implementation of activities.

The approach to the SIAs attempted to implement best practices that were identified in the planning phase, based on experiences from previous SIAs and other countries, within the feasibility of the local context. The best practices were identified through a consultative process at national level and addressed the various components of micro planning, training, advocacy and communication, logistics management, monitoring and evaluation.

Coordination mechanisms were established at national, regional, zonal and woreda levels, under the leadership of the Government and comprising of all stakeholders. Micro planning was conducted at the kebele level involving health extension workers and the local administration, and making use of a standard planning template that included social mapping. Emphasis was placed on early identification of hard to reach areas and special plans to ensure all areas are reached. Engagement of the Central Statistics Authority (CSA) was critical in the early stages of the planning and forecasting of requirements, and region-specific conversion factors were provided for the purpose of more accurate estimation of target populations. Following the micro planning, cascaded training was conducted. A Field guide, including an abridged version adapted for health extension workers (and translated in 4 local languages), were developed through an extensive consultative process at central level. Efforts were made to ensure good quality training.

Advocacy activities were launched to engage the political leadership at all levels. A multi-channel approach was adopted for social mobilization and included house to house canvassing using community volunteers, radio and television announcements, production of IEC materials, announcements using town criers, schools, religious groups and traditional leaders. A knowledge, attitudes and practices survey among selected communities and health workers guided the development of social mobilization messages and training materials.

Logistics distribution was managed centrally by the Pharmaceutical Fund and Supply Agency (PFSA).

A monitoring and evaluation framework was developed during the planning process that included different complementary modalities to monitor and assess performance of the SIAs. A total of 60 SIAs Facilitators supported the supervision and monitoring processes through pre-campaign assessments, and rapid convenience monitoring. Independent monitoring was conducted in 395 (50%) purposely sampled woredas based on risk and past performance. Formal evaluations were conducted on the best

practices in 20 selected woredas and a post SIAs coverage survey was done in 80 sampled woredas. In addition, evaluation of the effect of the SIAs on strengthening the routine system was conducted in 8 purposely sampled zones. Implementation of the 2nd phase SIAS benefited from the experiences drawn from the 1st phase.

Technical assistance for the planning and monitoring of the activities was provided from several partners such as WHO, UNICEF, CDC, The Bill and Melinda Gates Foundation and the American Red Cross. A total of US$ 11,836,105 was mobilized through the Government, local and international partners for the SIAs.

At the end of the nationwide exercise, a total of 8,928,955 (106% of the target population) children have received measles vaccine; 12,806,669 (97%) children received polio vaccine; 7,200,992 (97%) children received vitamin A supplementation; 5,123,717 (102%) children received deworming medicine; 1,861,865 (96%) children and 384,035 (80%) pregnant and lactating mothers benefitted from nutritional screening in selected woredas. The post campaign coverage survey obtained a national coverage of 88.2% (CI: 85.1-90.6%) for measles vaccination, 88.6% (CI: 84.8-91.5%) for polio vaccination, 80.6% for Vitamin A and 72.8% for deworming medication.

Implementation of the “best practices approach” during the nationwide measles follow-up SIAs raised the commitment to improve the quality at all levels and resulted in better coverage performance compared to previous SIAs in Ethiopia. In the six months following the conclusion of the SIAs, an overall reduction in the number of reported measles cases was noted, especially among the age cohort targeted during the SIAs (9-47 months old), with a shift in age pattern towards the older age groups; 70% of confirmed cases in the first four months of 2011 are above 5 years of age. Continued emphasis on strengthening the routine immunization system, and maintaining high routine measles vaccination coverage at Kebele level will be critical to sustaining the gains of the 2010-2011 follow-up measles SIAs.

1. Background

1.1 Administrative Structure of Ethiopia

Ethiopia is a federal country and administratively divided into nine Regional States and two City Administrations. The National Regional States and City Administrations are further divided into 98 zones, 801 Woredas and more than 20,000 urban and rural Kebeles.

There is extensive decentralization of service delivery, with relatively autonomous regions largely responsible for implementation. The woreda is the basic and lowest administrative unit and it is further divided into kebeles, representing urban dwellers associations in towns and peasant associations in rural villages; and has direct implementation and power to make decisions.

1.2 Social - Demographic and Economic Status

Ethiopia is the second highest populated country in sub Saharan Africa with an estimated population of about 79 million[1]. There is a wide regional variation in population ranging from 28 million in Oromia to 192,626 in Harari. Approximately 85% of the population lives in rural areas and about 81% reside in the three big regions: Oromia, Amhara, and Southern Nations and Nationalities People Region (SNNPR). The average household size is 4.8[2].

The annual population growth rate is 2.6%. Women and children constitute about three-quarters of the population. Infants under the age of one year represent about 3.4% of the total population; children below the age of five years account for 14.6% of the total population and 24% of the total population are women in the reproductive age group (15-49 years).

Ethiopia is one of the least developed countries in the world, with an estimated annual per capita income of US$100. Forty-seven percent of the total population lives below the poverty line. The 2003 UNDP Human Development Index (HDI) for Ethiopia stands at 0.367; it ranked at 170 out of 177 countries listed[3].

1.3 Health Indicators

Infant and under-five mortality are at 75 and 123 per 1,000 live births respectively[4]. The high child mortality rate in Ethiopia is due to combined effects of a high incidence of infectious diseases and

[1]2010 population projected from 2007 census
[2]EDHS 2000, *ibid*
[3]UNDP report 2003
[4] Source: FMOH 1998 EC (2005-06), Health and Health Related Indicators

inadequate infant and young child nutrition. Measles accounts for 5% of child hood mortality[5]. The chronic malnutrition rate (stunting) is reported to be 46%, acute malnutrition (wasting) 11%[6]. About 27% of women are malnourished (BMI < 18.5). Vitamin A deficiency (VAD) is a severe public health problem affecting 30-95% of children 6-59 months of age all regions of the country[7]. Vitamin A deficiency has also been observed in school age children up to 14 years of age[8].

1.4 Accelerated Measles Control Activities In Ethiopia

Ethiopia adapted the WHO/UNICEF global measles mortality reduction and regional elimination strategic plan in which the following strategies are recommended for reduction of measles morbidity and mortality:

- Ensuring high routine immunization coverage: providing the first dose of measles vaccination to all children less than one year of age
- Providing a second opportunity for measles vaccination for all children (through routine immunization programs or SIAs);
- Establishing measles case-based surveillance, supported with laboratory confirmation; and
- Improving case management of measles cases.

Ethiopia introduced measles vaccination in 1980, as part of the Expanded Program on Immunization (EPI), with the first dose of measles vaccine administered at 9 months of age. The measles immunization coverage remained below 50% until 2003. Following accelerated efforts to improve performance by the FMOH with the support from EPI partners, the coverage has progressively improved since 2003. Administrative measles vaccination coverage increased from 44% in 2003 to 81% in 2010 at national level (Figure 1). Key contributing factors to improvement of performance include strengthening of links between health services and the community through the Health Extension Worker Program since 2003, the implementation of the Reaching Every District (RED) approach initiated in 2004 and enhanced routine immunization activities (ERIA) since 2009.

[5] Source: National Child Survival Document, 2005
[6] Demographic and Health Survey 2005
[7] Ethiopian Health and Nutrition Research Institute, 1996
[8] World Vision 1997

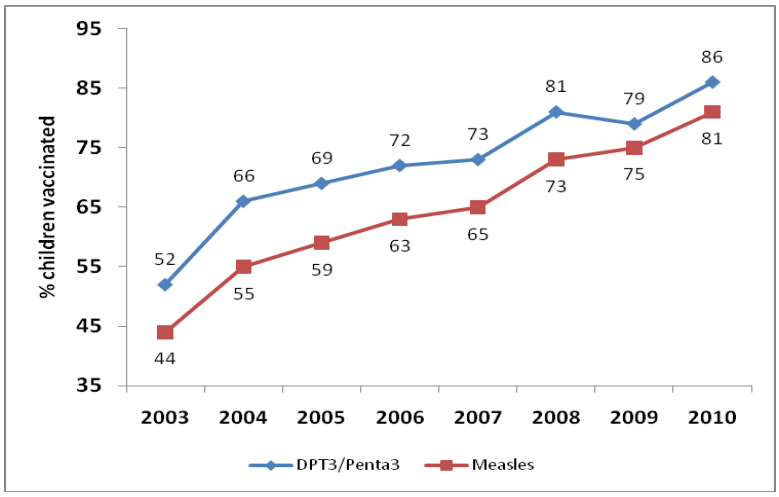


Figure 1. Routine Immunization administrative coverage (DPT3 and measles first dose), Ethiopia, 2003-2010.

Vaccination coverage levels at sub national level have similarly shown progressive improvement with reduction in proportion of zones achieving less than 50% coverage and increase in proportion of zones achieving greater than 90% coverage since 2004 (Figure 2).

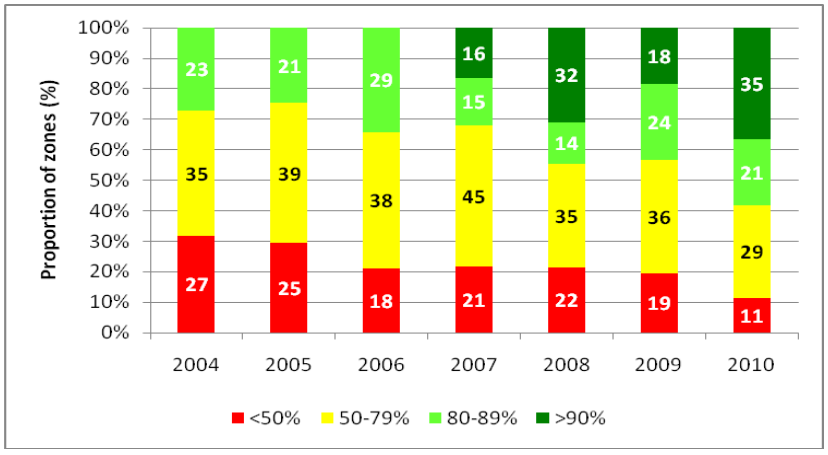


Figure 2. Proportion of administrative zones according to their EPI administrative coverage (DPT3). Ethiopia.

As part of measles control efforts, supplemental immunization activities (SIAs) were conducted from 1999 to 2001 in phases, targeting children less than five years of age in all regions. A total of 12 million children under five were vaccinated in this initial effort (Table 1). Starting in 2002, catch up measles SIAs were initiated and a total of 31.8 million children aged 6 months to 14 years were targeted with an achievement of 91% coverage between 2002 and 2003. Five zones of Afar Region and two zones of Oromia Region (East and West Harerghe) were covered in 2002. In 2003, the age range was widened to

target children 6 months to under 15 years of age, because of drought and high rate of malnutrition; all regions of the country except Gambella were targeted for measles catch-up campaigns between January 2003 and September 2004. Gambella conducted measles catch-up campaigns in May 2005 (Table 1).

Table 1. Measles SIAs Coverage Results, Ethiopia 1999-2006

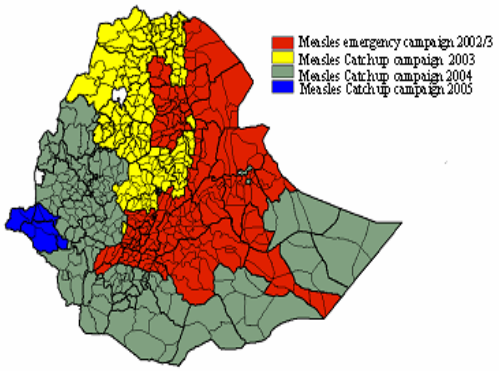
Year	Number of Zones	Target population		Coverage		Remarks
		6 – 59 months	6 months - 14 Years	Overall (%)	Range (%)	
1999	9 zones	3,752,361		79	64 -95	SIAs in selected zones
2000	45 zones	6,615,786		78	70 -125	SIAs in selected zones
2001		1,631,853		75	27 – 100	SIAs in selected zones
2000-2003[9]	All Zones		31,819,492	91[10]	87-99	Catch-up SIAs
2005-2006	All Zones	11,127,32		89.4	67-100	1st follow-up campaign

Source: FMOH

Following the catch-up SIAs, Ethiopia implemented measles follow-up SIAs at two year intervals in order to reduce the accumulation of susceptible children who do not benefit from measles routine vaccination and those who fail to seroconvert following an initial dose. The first and second follow-up campaigns were conducted in a rolling (phased) pattern to alleviate the shortage of human resources at different levels of the health system. The first follow up SIAs were conducted during 2005-2006 targeting 12,813,180 children aged 6-59 months and achieved 89.4% administrative coverage (Table 1). The second follow up SIAs were conducted in 2007/08 targeting 12,972,020 children aged 6-59 months and achieved 93 % administrative coverage (Table).

[9] Gambella region conducted the catch up campaign in 2005
[10] Rapid convenience survey result was 94 %

Table 2- Measles SIAS follow-up SIA, Ethiopia, 2007-2009

Region	Target population	Coverage (%)	Year of implementation	Remarks
Afar	279,102	94.6	2007	
Somali	785,386	91.7	2008	
SNNPR	2,538,255	96.2	2008	
Dire Dawa	64,323	53.7	2008	
Addis Ababa	317,591	57.1	2008	
Harari	30,473	86.1	2008	
Amhara	3,160,408	92.8	2008	
Benshangul Gumuz	122,059	93.0	2008	
Oromia	4,838,009	95.7	2008	East and West Hararge conducted the SIAs in 2007
Gambella	62,504	92.4	2009	
Tigray	773,910	85.6	2009	
Total	**12,972,020**	**93.0**		

1.5 Measles Burden in Ethiopia

The average number of measles cases reported through the national aggregate reporting system in Ethiopia has been between 2000 and 5000 every year from 1990 to 2003. However, it is believed that only a small fraction of the disease burden is reported due to reasons related to health service access, the lack of active surveillance, socio cultural beliefs associated with measles, etc. The true burden during this period is estimated to be between 1 million and 1.4 million cases per year according to coverage-based estimates.

Case-based measles surveillance was initiated in Ethiopia in 2003. The number of reported suspected measles cases has increased through the years and this is believed to be partly due to the increased sensitivity of the surveillance system, rather than a failure of the control efforts. By the end of 2009, there were 425 laboratory-confirmed and 1,519 Epi-linked cases. In the first 6 months of the year 2010, a total of 848 laboratory confirmed and 2,401 Epi-linked cases of measles were reported (Figure 3). A

total of 60 outbreaks were confirmed in 2009 with 1,179 confirmed measles cases; while 93 outbreaks were confirmed by July 2010 with a total of 2,889 confirmed cases (Table 3).

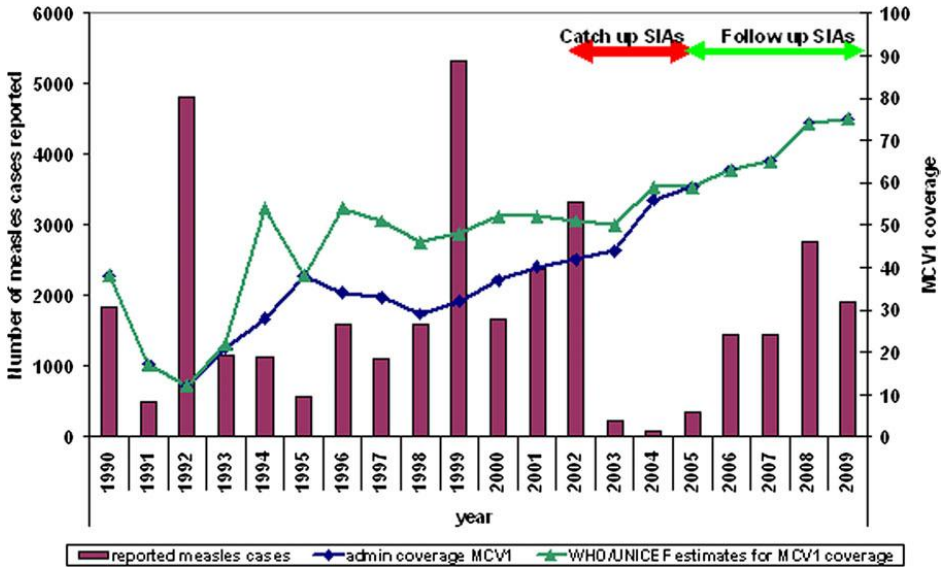


Figure 3: Measles case reports and vaccination coverage. 1990 - 2009. Ethiopia.

Table 3. Summary of confirmed measles outbreaks, Ethiopia 2004- 31 July 2010.

	2006	2007	2008	2009	2010
No of Woredas with measles outbreaks	60	89	59	51	87
Outbreak cases confirmed by Lab	396	564	309	248	488
Epi-linked cases	325	533	3,092	1,530	2,401
Total confirmed outbreak cases	**721**	**1,097**	**3,201**	**1,776**	**2,889**

In Ethiopia, a seasonal pattern of occurrence of measles has been observed over the years, with increased number of measles cases from December to February (Figure 4). Due to the low sub national routine measles coverage and prevailing poor living conditions, measles outbreaks continue to occur frequently in different parts of the country, most especially in Oromia and SNNPR Regions (Figure 5). Between January and the end of July 2010, a total of 3,249 cases were reported, surpassing the 2009 levels. This was expected considering the immunity profile of the population, with suboptimal routine and SIAs coverage levels failing to protect the majority of young children.

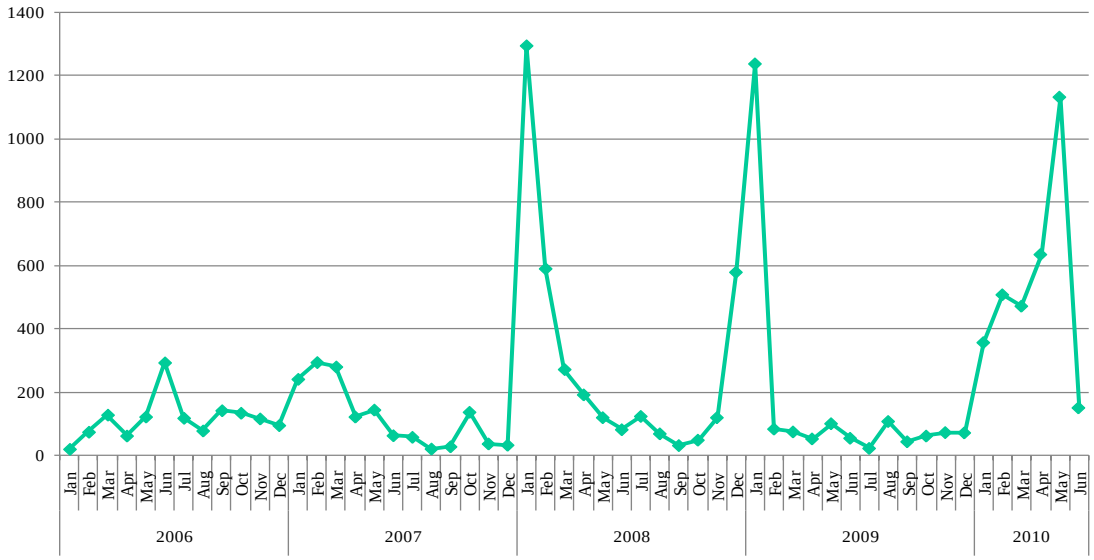


Figure 4- Trend of confirmed measles cases by month. January 2006 - June 2010. Ethiopia.

With respect to the epidemiological pattern, 52% of confirmed measles cases in 2009 were below 5 years of age (Figure 6). The target age group for the follow up SIAs in 2010 and 2011 was decided as 9 - 47 months considering the interval since the last SIAs, the epidemiological pattern, and the gaps in routine immunization coverage. The measles consultative meeting held in June 2007 also passed the same recommendation.

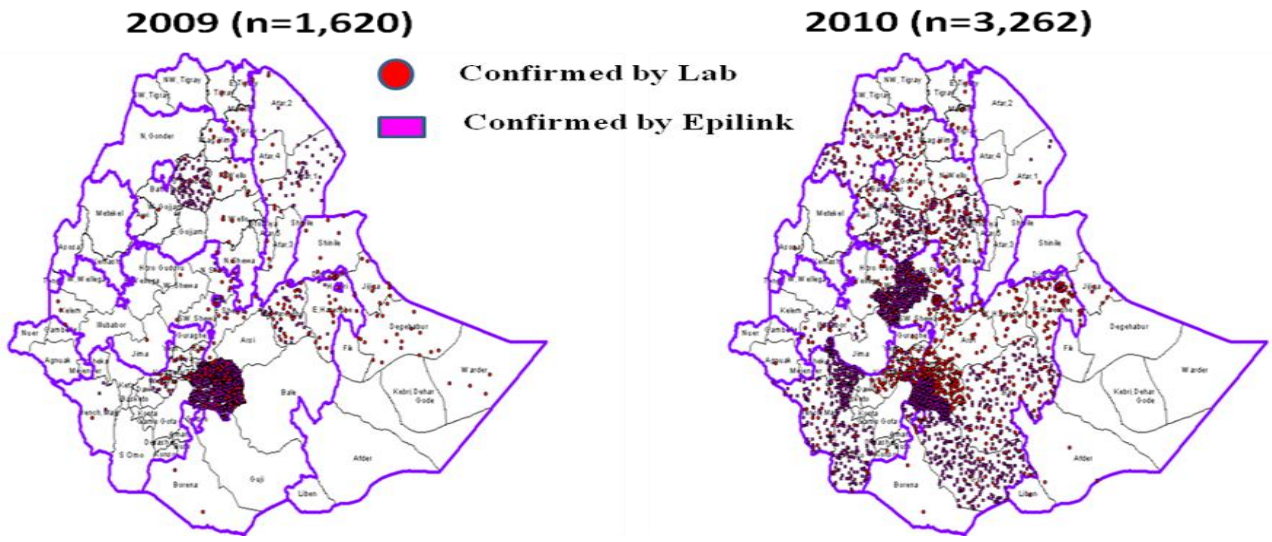


Figure 5- Spot map of confirmed measles cases, Ethiopia. 1 Jan-31 July, 2009/10

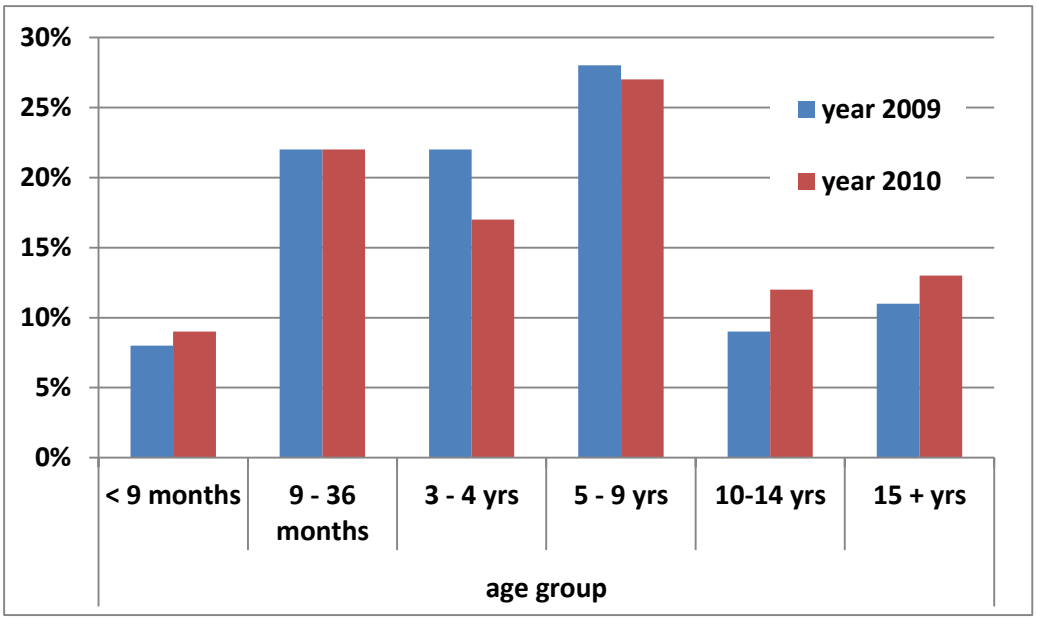


Figure 6: Confirmed measles cases by age group, January to July 2009/ 2010, Ethiopia. For 2009 N= 1620, and for 2010 N=3262.

Half of the confirmed cases in 2009 had never received any measles vaccine compared to 63% in 2010 (Figure 7). In the past few years, it has been observed that more and more of the measles cases are occurring in children and persons above 5 years of age. The high proportion of unvaccinated cases and transmission among older age groups explains the frequent measles outbreaks in Ethiopia despite attempts of systematic implementation of strategies.

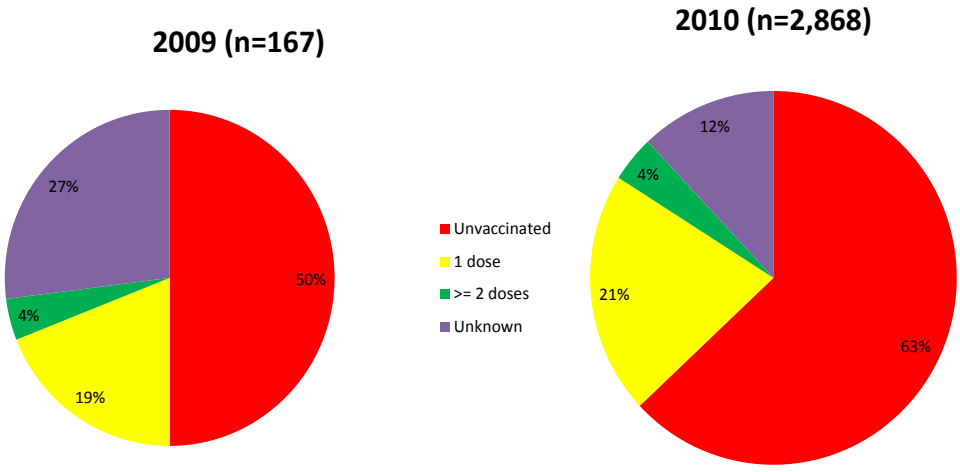


Figure 7: Vaccination status (number of measles doses received) among confirmed measles cases, Ethiopia, January – July 2009/2010

2. Ethiopia Measles Pre-elimination Plan 2010

2.1 Goal

The overall goal of the measles pre-elimination plan in Ethiopia is to reduce measles cases and deaths by 90% in 2010 compared to 2002 reported cases.

2.2 Objectives

1) To strengthen routine immunization to reach at least 82% of all target children at national level by end of 2010.
2) To provide a second measles vaccination opportunity to at least 95% of children aged 9 to 47 months old.
3) To strengthen case based measles surveillance for prompt detection and management of outbreaks and impact monitoring.

2.3 Integrated Measles SIAS 2010-2011

Measles follow up campaign activities were planned and conducted in 2 phases (Figure 8):

- October 2010: 7 regions were targeted - Oromia, Amhara, SNNPR, Somali, Addis Ababa, Harari and Dire Dawa
- February 2011: 4 regions were targeted - Afar, Benshangul Gumz, Gambella and Tigray. The 2nd phase was scheduled for regions that implemented their last follow up SIAS more recently than the rest of the country i.e. in 2009, except for Benshangul Gumz that specially requested for late implementation due to unfavorable weather conditions in October which would decrease the quality of the SIA.

Objectives of the 2010/ 2011 Integrated Measles SIA

1. To vaccinate at least 95% of children aged 9-47 months of age (8,009,474 children) with measles vaccine regardless of previous vaccination status.
2. To provide a supplemental dose of OPV to 13,073,267 children aged 0 to 59 months old.
3. To provide Vitamin A supplementation to 7,687,292 children aged 6 to 59 months old and deworming tablet to 5,193,892 children aged 24-59 months old.

4. To conduct nutritional screening for acute malnutrition for under 5 children, pregnant and lactating women with a view to refer cases of moderate and severe malnutrition to the nearest therapeutic feeding unit or targeted supplementary food distribution centre when appropriate, in selected woredas.

5. To use the opportunity of the measles SIAS to strengthen the routine immunization system.

The approach to the SIAs attempted to implement best practices to ensure improved quality of the SIA, and to achieve systematic involvement of all levels to reach the target population. At the end of the process, it is planned that the findings of the best practice implementation will be documented and disseminated to other countries in the African Region.

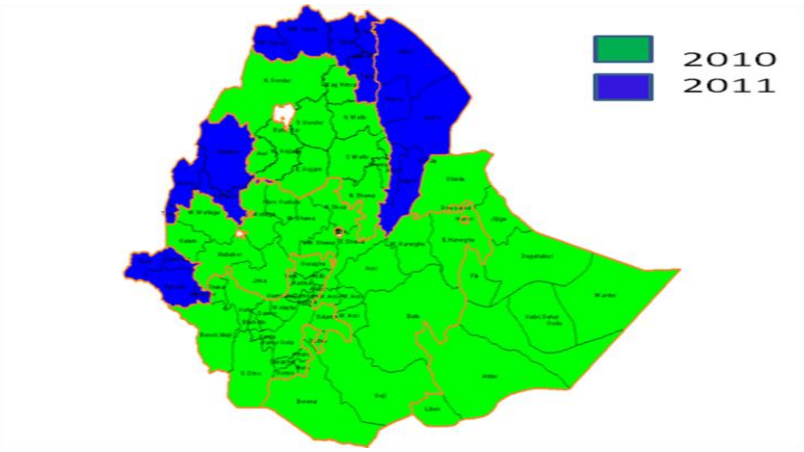


Figure 8. Areas targeted by each phase of the Measles SIA, Phase I in Nov 2010, and Phase II in Feb 2011.

2.4 *Documentation of the Best Practice Measles SIA*

2.4 1 Objectives

- To capture the inputs, processes and outputs of the best practice measles SIAs in a manner complementary to the quantified documentation
- To capture the subtle elements and issues on a proactive and prospective basis so as to explain the rationale behind some decisions and directions taken in the preparation and implementation of the SIAs
- To document the efforts that were made and the process followed to make the measles SIAs a quality activity

- To serve as a white paper explaining the process of a best practices SIAs, with a view to publication.

2.4.2 Scope

This documentation captures all information and activities from the inception up to the completion of the best practice measles SIA. There are 4 main sections of the document: Inception, Pre implementation, Implementation and Post implementation.

2.4.3 Data collection, Storage and Review

To facilitate the documentation process, a team comprised of FMOH, WHO and UNCEF was established by the National SIAS Task Force, under the leadership of FMOH with WHO as secretariat.

All relevant information was compiled and reviewed to support the documentation process. The information includes official letters sent out from the FMOH to regions and partners, workshop proceedings, minutes of the task force and sub committee meetings at all levels and reports. In addition, communication and advocacy materials such as media messages, press clippings, quotations from speeches and presentations and pictures were collected and utilized.

A data base with all the relevant information was set up at the FMOH and WHO, with a backup file updated at the end of each week. Materials like news papers, video clips, and tape recorders were kept at the MoH Public Relations Division.

3. Inception of the Integrated Measles SIA

3.1 Developing a Plan of Action

In October 2009, a plan of action including the proposed budget for the measles SIAS in Ethiopia for October 2010 and 2011 was developed through a consultative process involving FMOH and partners. To this end, the specific objectives and strategies stated in the plan were:

- To provide a first opportunity of measles vaccination for children below the age of one year through routine immunization services using the reaching every child strategy
- To vaccinate 8,009,474 (95%) children aged 9-47 months through the follow up high quality SIAs
- To provide vitamin A supplementation to 9,808,738 children during measles SIAs.
- To strengthen case based measles surveillance and response

The plan of action was endorsed by the ICC and submitted to WHO/AFRO for review and resource mobilization. The Measles Partnership, in collaboration with the Bill and Melinda Gates Foundation, pledged support for Ethiopia to conduct "best practices" measles SIAs. The Best Practice approach would provide an opportunity to systematically document and implement lessons learnt in the past (from within the country and from other countries in the Region) with regards to implementation of measles SIAs in such a way as to maximally support routine immunization and to attain 95% SIAs coverage in at least 90% of districts (woredas).

3.2 Consultative Workshop on Best Practices Measles SIA

Following the plan development, WHO/AFRO and UNICEF/ESARO supported an in-country consultation in March 2010 to identify the "best practices" to be implemented in the SIA. The consultative workshop was conducted on 16-18 March 2010 with the overall objective of providing a forum to review experiences, lessons learned from previous SIAs and generate ideas with regards to the best practices to implement a high quality Measles SIA, for incorporation in the planning and implementation of the SIAs**.** (Figures 9, 10). The main objectives of the workshop were:-

- To identify and incorporate best practices in the planning and implementation of measles SIAs.
- To utilize the upcoming SIAs to further strengthen routine immunization systems.

- To produce a document outlining the best practices to be disseminated to other countries in the Region.

Participants were drawn from the FMOH, RHBs, in country implementing partners, and international partners (WHO/AFRO, UNICEF/HQ and ESARO, CDC, American Red Cross and Sabin Vaccine Institute). The WHO Representative (WR), Dr Fatoumata Nafo-Traore, in her opening remarks highlighted the challenges of the measles control program and the regional target for measles pre elimination by the year 2012. The WR acknowledged the 92% measles mortality reduction in the African region but stressed the need to sustain this reduction by attaining and maintaining 95% routine measles immunization coverage in every district.

In his opening remarks, Dr Kesete Berehan Admasu, Director General FMOH, noted that Ethiopia has faced several measles outbreaks over the last few years. Therefore, there is a need to map out best practices to further reduce morbidity and mortality. He also stressed the potential that exists in the country especially with the deployment of health extension workers (HEW) in each Kebele. He pointed out that the country needs to use these HEW especially to sustain the gains that have been achieved.

The workshop methods included presentations, plenary discussions and group discussions to develop consensus on the best practices, with a focus on implementing the identified best practices given the reality on the ground. The main areas of focus for discussion were:

- Advocacy and Resource Mobilization
- Training
- Micro planning
- Logistics
- Social mobilization and communication
- Monitoring and Evaluation
- Strengthening Routine Immunizations through SIAs
- Integration of interventions

The workshop was preceded by through reviews of data and reports in relation to the various aspects of the preparation and implementation from previous measles SIAs in Ethiopia. Practices that consistently led to good results were identified, and novel approaches were proposed for exploration.

The best practices from measles SIAs in Ethiopia as well as other countries within the African region and elsewhere were reviewed and discussed during the workshop in order to select practices proven to produce results, and are potentially scalable and replicable in the Ethiopian context. [Table 4]

Figure 9. Participants at the measles SIAs best practices consultation. Ethiopia. March 2010.

Figure 10. Measles Best Practices Consultative Workshop, March 2010, Addis Ababa

The consultation and further follow up work by technical committees solidified the plans for the planning, implementation, monitoring and documentation of the SIAs. A detailed report of the proceedings of the workshop is available.

Table 4: Selected Best Practices for the planned Measles SIAs in Ethiopia, March 2010.

Micro planning

• Procurement of the required vaccines and injection equipment 6 months prior to SIAs at national level
• Micro-planning done in each kebele with the involvement of the all stakeholders including local NGOs, Woreda/Kebele Administrators, HEWs from the early stages of planning.
• Micro-planning activities including social mapping and identification of high-risk areas. Maps to be:
  ○ Utilized for micro-planning and deployment of vaccination teams and supervisors
  ○ Posted publicly in the health facility
• Micro-planning tools to systematically address routine immunization issues

Advocacy and Social Mobilization
• Specific national level plans for advocacy and communication to be available at least 2 months before the SIAs • Adequate funding to be allocated to advocacy and communication activities and made available at the implementation level, at least one month prior to the SIAs • Social mobilization activities at community level should start at least 1 month prior to the SIAs. • House to house social mobilization activities should be performed; utilizing community mobilizers in areas where they have been deployed. • Clear and crisp messaging using multi-channel communication to be done in the appropriate languages • Process and output indicators to be developed and used to monitor communication activities at all levels • Communication messaging to be based on a clear and evidence-based understanding of the Knowledge and Attitudes of the community.
Monitoring and Evaluation
• A central level task force to be established to oversee planning, implementation, and M & E, for the best practice SIAs. • Training of Independent monitors 1 week prior to SIAs. • Regular coordination meetings to be held at regional and zonal levels months prior to the campaign, with increasing frequency, overseeing the pre-campaign activity checklist/timetable. • Regional/Zonal/Woreda level task forces should complete a final evaluation to ensure all necessary preparations are ready 2 weeks prior to the SIAs, address issues, and post-pone activities if necessary. • District councils to participate in supervision and monitoring activities, including the daily monitoring evening meetings. • Focused supervision to be conducted in the hard-to-reach/high-risk areas and populations. • Administrative coverage data to be compiled and sent to the national level 2 weeks after the SIAs.
Training
• Pre-/Post- test of all trainees at all levels. • Training of trainers to be conducted by a skilled team of resource persons at national level. • Training for micro-planning to take place well before training for health workers. • Facilitators and supervisors to be involved in the training of vaccinators; a session of training to have no more than 25 trainees per trainer. • The training should be at least one whole day in duration if the activity involves single antigen interventions, and lengthened appropriately as the number and type of child survival interventions is added, to allow quality work. • All training sessions to include role play, practical demonstrations and exercises to impart skills in addition to theoretical knowledge.
Logistics

• Pre-SIAs assessment of the status of the cold chain system to be followed by appropriate maintenance 2 months in advance of SIA
• Develop PFSA distribution plan for vaccine carriers, cold boxes, vaccines, injection equipment, and finger markers based on micro plans, including central, regional, and Woreda level redistribution 2 months in advance of SIAs
• Timely distribution of vaccines and other supplies to the different levels
  ○ Distribution of vaccines and other supplies including IEC materials to regions/zones 1 -2 months prior to SIA
  ○ Distribution of injection equipment and other supplies to Woreda/sub-city 1 - 2 months prior to SIA
• Distribution of adequate vaccines to Woreda/sub-city 1- 2 weeks prior to the SIAs.

Strengthening Routine EPI through SIAs
• Conscious effort to be made to strengthen the routine immunization system in all aspects of the SIA: Planning, Coordination, Training, Communication, Monitoring

3.3 Advocacy Visits

The technical team from WHO/AFRO, WHO/IST, UNICEF HQ, UNICEF/ ESARO, American Red Cross and the WHO Country Office conducted high level advocacy visits to key stakeholders. Discussions took place with the State Minister of the FMoH, WHO Representative, UNICEF Representative and the USAID Chief of Health, with the aim of soliciting full support for the SIAs.

Subsequently the measles SIAs plan of action was updated in July 2010, mainly to incorporate the best practice aspects, and was shared with local and international partners.

4. Preparation for the SIAs

4.1 Coordination

A key recommendation from the SIAs Best Practice Workshop and Advocacy Meeting conducted in Addis Ababa on March 2010 was to establish a National Task Force under the leadership of the FMOH and representatives from the various stakeholders at national level, to coordinate all activities of the SIA.

4.1.1 Central Level Coordination

The Inter-Agency Coordination Committee (ICC) approved the Terms of Reference for the National Task Force and sub-committees in April 2010 and comprised of the FMoH (Chair), PFSA, WHO (Secretariat), UNICEF, United States Agency for International Development (USAID), CORE GROUP and Integrated Family Health Partnership (IFHP). The Chairperson of the Task Force was the Director-General of Health Promotion and Disease Prevention from the FMoH and WHO as designated secretary. The Task Force held its first meeting on 12 April 2010 during which the terms of reference for the Task Force were discussed. The Task Force agreed to establish three subcommittees and proposed the membership and terms of reference for each subcommittee (Table 5 and Annex 1). Subsequently a fourth subcommittee for Resource Mobilization was established, with the Director of the Resource Mobilization Unit of the FMOH as Chair, and WHO and UNICEF as members.

Table 5: National Measles SIAs Task Force Subcommittees, 2010-2011

Logistics	Social Mobilization	Planning, Training, Monitoring and Evaluation (PTME)	Resource Mobilization
FMoH - PFSA (Chair)	FMoH - Public Relations Directorate (Chair)	FMOH - HPDP (Chair)	FMOH - Resource Mobilization Directorate (Chair)
FMOH - HPDP	CORE GROUP	FMOH - Planning (M&E)	UNICEF
UNICEF	UNICEF	UNICEF	WHO(Secretary)
WHO (Secretary)	WHO(Secretary)	WHO(Secretary)	
	Last 10 Kilometers(L10 K)	USAID	
	Lions Club		
	Red Cross		

Each agency appointed to the Task Force selected a representative to attend the subcommittee meetings; in addition representatives for each subcommittee attended the general Task Force meetings.

The Task Force agreed to hold regular meetings every two weeks and eventually hold weekly meetings towards the implementation of the SIA. Tuesday afternoon was designated as the scheduling of the Task Force meetings at the FMOH. This schedule was followed with consistent attendance of the FMOH and partners. The Task Force also agreed to provide regular updates to the Technical ICC on the progress of the preparations for the SIAs. This was done at the monthly ICC meetings held on 29 April 2010, 27 May 2010, June 29 2010, 2 September 2010 and 17 January 2011.

Proceedings of the National Task Force meetings generally included updates from the four subcommittees on progress of the preparations, updates on regional preparations from the FMoH case teams and review of the timeline of planned activities. FMOH Case Teams were assigned to obtain weekly updates from the regional level task forces using a standard template provided by the documentation team.

Subcommittees held separate meetings to plan the operational aspects of the SIAs. The planning, Training, Monitoring and Evaluation (PTME) subcommittee organized three harmonization meetings for all the subcommittees to streamline planned activities and review relevant documents and training materials. The sub-committees also met on a weekly basis.

Figure 11. Meeting of the National Measles SIAs Task Force, Addis Ababa. August 2010.

"The best practice measles SIAs required full commitment and participation of all stakeholders at all levels early in the planning process. Thorough planning in all aspects including anticipation of potential challenges, critical follow up and securing of resources needed for the SIA was essential. Additionally high level commitment and convincing of the Political Officials facilitated the process." ***Dr Neghist Tesfaye, Program Coordinator Maternal, New Born, Child and Adolescent Health, Federal Ministry of Health****.*

4.1.2 Regional Level Coordination

In order to strengthen coordination and provide technical oversight at all levels, the FMOH sent a letter to all regions in June 2010 to establish Regional, Zonal and Woreda Task Forces. Terms of reference for the task forces were also sent in the formal communication to the regions. The regions were instructed to provide regular updates to the national SIA Task Force on progress of their activities. Woreda level task forces were expected to report to the zonal level and zonal level to the regional level.

The FMOH case teams were assigned the responsibility of contacting a regional level EPI focal person to obtain a weekly update on status of the task force activities and general preparations for the SIA. The update was provided to the weekly National Task Force meetings.

Regions and Zones were encouraged to share Task Force minutes with the central team. SNNPR and Somali Regions were commendable in sharing regular task force minutes with the central level.

Figure 12. Sub-national level task force meetings.

4.2 *Planning*

4.2.1 Central Level Planning

The consultative workshop held in Addis Ababa in March 2010 identified areas that are critical for implementing a high quality SIA[11]. The best practices identified were a key focus in the planning for the SIA *(Table 4)*. Among the best practices identified for micro planning was a bottom-up approach to the planning with the involvement of the lowest level of administration in the process. In this regard, the National Task Force agreed to develop a micro planning template for the Kebele level outlining the critical information needed such as target population, cold chain equipment, human resources and transport needs, among others. In addition, a template for identification of key stakeholders and social mapping was developed *(see field guide for micro planning templates).* The workshop was conducted early to ensure implementation of best practices early in SIA preparations. In addition, the discussions provided a foundation of how to implement the upcoming SIAs, beyond the previous experiences, setting a tone for high quality implementation using the best practices feasible.

WHO and UNICEF recruited central level consultants early in the planning process to coordinate the preparations for the SIAs. In addition, 17 National SIA Facilitators were recruited by WHO to coordinate the planning activities at zonal level based on qualification and previous experience in coordinating SIAs. The Facilitators were assigned to support 2-3 zones in the planning for the SIAs over a four week period (July – August 2010).

Consultations were made with the Central Statistics Authority (CSA) to provide regional population projections from the 2007 national census as well as regional-specific conversion factors for the different target groups for all regions. The conversion factors were shared with the regions and assisted with planning for logistics requirements. A review of the conversion factors revealed some inconsistencies which required significant consultation with CSA to rectify.

The microplanning plan was developed by the PTME Sub-committee. The plan included a bottom-up approach, with the use of uniform formats nationwide. The plan and formats were approved by the SIAs task force prior to distribution.

[11] Best Practice SIA workshop proceedings

4.2.2 Regional Planning Workshops

The National Task Force organized 2 regional planning workshops held simultaneously at Bahir Dar and Adama on 14-15 July 2010. The objectives of workshops were to:

1. To provide orientation to participants on the 2010/ 2011 integrated measles SIAs
2. To strengthen the capacity of regions to facilitate the measles SIA micro planning from Kebele to Zonal level
3. To provide orientation on the establishment of Measles SIA Task Forces at regional, zonal and woreda levels.
4. To provide orientation on how routine immunization can be strengthened by the SIA
5. To provide orientation on the new AEFI guidelines

Two representatives from each Regional Health Bureau (RHB) were invited to participate in the planning workshops; other participants included FMOH (including the Case Teams), WHO and UNICEF central and Field Officers, other partners and National SIA Facilitators. A total of 88 participants attended the planning workshops (65 in Adama and 23 in Bahir Dar). All regions were represented at the 2-day workshops.

The workshops were officiated by the Head of the RHBs of Oromia and Amhara regions respectively and were facilitated by FMOH, WHO and UNICEF central teams. The proceedings included power point presentations on overview of the SIAs, micro planning guidelines, logistics preparations, advocacy and social mobilization, implementation and monitoring of the SIA, strengthening routine immunizations, measles surveillance; group and plenary discussions and role plays on organization of vaccination posts.

4.2.3 Zonal/ Woreda/ Kebele Level Planning

Following the regional planning workshops, the micro planning template was distributed to all Kebeles in the country with a two-page guide on how to fill the template. The assignment for filling in the template was given to the Health Extension Workers (HEW), HEW supervisors and Kebele Chairman. Once filled, the completed template was submitted to the Woreda Health Office for review, compilation and then to the zonal level.

Facilitation was provided to all zones to conduct a zonal level workshop to review and compile the woreda level micro plans. Participants of the workshop included 2 representatives from the woreda level, the Zonal Health Bureau and partners. Zonal level micro plans were submitted to the regional level

for compilation and finally to the national level. The micro plans were completed with 100% completeness and submitted to the national level by mid August 2010.

At national level, the regional level micro plans were entered into a data base at WHO by zone. A review was done to check for consistency in estimation of target populations and adherence to the guidelines for micro planning by the regions. There was need for adjustments to be made with regards to personnel costs. The FMOH made a decision to only effect payment of allowances for health workers/ HEW if they are working outside their assignment area or if they are working on public holidays or over the weekends. To this effect, payment was to be made for only 2 of the 4 days of the implementation (Saturday and Sunday); which necessitated adjustment of the regional micro plans. The regional level micro plans were summarized into a worksheet indicating the relevant information (target population, number of posts, human resources and costs) and shared with the Task Force and resource mobilization subcommittee.

Development of the micro plans provided an opportunity to build the capacity of health workers to in planning for SIAs as well as for routine activities.

4.2.4 Planning for Integrated Interventions

The Plan of Action originally submitted noted that every effort should be made to integrate Enhanced Outreach Services (EOS) into the SIAs. The Task Force agreed to integrate EOS interventions (vitamin A, deworming and nutritional screening) with the measles SIAs. Integration of services was to occur in regions/woredas that were scheduled for implementation based on the recommended 4-6 month interval between administration of the vitamin A and deworming interventions. Further nutritional screening only occurs in woredas at high risk of malnutrition as designated by the World Food Program (WFP). EOS micro planning is routinely done on an annual basis and it was therefore necessary to integrate the already developed EOS micro plans to ensure all aspects are adequately planned for, particularly due to the need for increased human resources with integration. Integration of EOS required additional 2-4 personnel per post (1 health worker and 1 volunteer for vitamin A and deworming and 1 health worker and 1 volunteer for nutritional screening), depending on whether nutritional screening was to be done or not at that post.

Initially 3 regions were identified as due for their EOS interventions in October 2010 (Harari, Dire Dawa and Somali). The Harari and Dire Dawa were able to develop integrated micro plans at the time of the measles SIAs micro planning process; Somali Region deferred the decision to integrate later on after the micro planning process was complete. Following completion of the measles SIA micro planning process, it was then decided that Oromiya and Amhara regions would also integrate EOS with the measles SIAs. There was therefore need to re-adjust the micro plans at regional level to ensure integration. A total of 179 woredas were identified in Oromia, Amhara and Somali regions for nutritional screening that targets children 6-59 months, pregnant and lactating mothers with children below 6 months of age. However, Somali region opted not to conduct nutritional screening with the SIA due to human resource constraints.

The decision to integrate OPV with the measles SIAs was made early in the planning process, as per the technical advisory group recommendations and in view of the high risk of polio importation and the recent confirmed outbreak of circulating vaccine derived polio virus type 3 (cVDPV3) in Bale zone (Oromia region) and Degehabur zone (Somali region) in early 2010, where 5 cases were confirmed. The SIA was seen to be a golden opportunity to raise the population immunity profile against polio. The recommended target age group for polio SIAs is under-five children, and since Vitamin A and deworming interventions were to be given in most regions to under-five children, it was agreed that OPV would also target under-five children.

"Integration has improved on the messaging and overall social mobilization activities" ***Sister Rokia Ahmad-Nurse, Assaita Health Center, Afar Zone 1***

4.2.5 Planning for Hard to Reach/ Border/ Conflict Areas

Based on experiences from recent polio SIAs, where some areas with particularly difficult to reach populations or with inter-border conflicts were poorly covered, it was agreed that special attention needed to be made to planning for hard to reach areas. Some areas along the borders of Oromiya and Somali regions are not under the jurisdiction of any of the 2 regions, and therefore require either joint planning or intervention by the Federal level to ensure they will be reached. In addition, a number of zones have 'pocket' areas that pose particular challenge for routine service delivery. Close to 23% of Kebeles were identified as inaccessible in the micro plans, mainly located in the pastoralist regions (Afar, Gambella, Somali and Benshangul Gumz) and Oromiya region. Characteristically, the hard to reach areas included populations that were scattered, inaccessible, insecure or in conflict.

Through the micro planning process, an inventory of difficult areas was compiled, including their population size and special considerations. The FMOH used the opportunity of meetings with RHBs to sensitize the authorities and discuss how best these populations could be reached.

Specific strategies planned for reaching the hard to reach populations included:

- Additional manpower (vaccination teams) deployed during the implementation to the specific populations
- Deployment of additional supervisors to the target areas
- Initiation of implementation in high risk areas and then proceeding to the low risk areas
- Use of fast cold chain system in remote areas to ensure vaccines were availed at all levels

Table 6: Summary of target population by intervention for the integrated measles SIA, Ethiopia

Intervention	Target Age	Proportion	Target Population	
			2010 (22-25 Oct)	**2011** (18-25 Feb)
Measles vaccine	9-47 months	9.76%	7,656,367	774,658
Oral polio vaccine (OPV)	0-59 months	14.6%	11,985,743	1,178,819
Vitamin A supplementation	6-59 months	12.3%	7,028,066 (Oromiya, Amhara, Somali, Addis Ababa, Harari, DD)	430,588 (Afar, Gambella and B/Gumz)
Deworming	24-59 months	11.2%	4,756,566 (Oromiya, Amhara, Somali, Addis Ababa, Harari, DD)	285,870 (Afar, Gambella and B/Gumz)
Nutritional screening	6 -59 months, pregnant and lactating mothers with children <6 months	14.6%	1,743,508 (Selected woredas in Oromiya, Amhara and Harari)	191,484 (Selected woredas in Afar and Gambella)

Key issues on micro planning:

1. The estimation of the target age population was a challenge. The last national census was conducted in 2007, however concerns have been raised about the accurate estimation of the under-one population from the census. The Central Statistics Authority (CSA) had to provide regional specific population projections and proportions for the different age categories for the SIA. Availability of the appropriate conversion factor delayed the finalization of the target population estimates, as there was need for verification and approval by CSA.
2. Several concerns were raised about the age group selection for the measles SIA, being different from previous SIAs that targeted 9-59 months old children. In addition, the rationale for phasing the SIA was discussed severally.
3. Integration:
    - The different age groups for the interventions to be provided (9-47 months, 0-59 months, 6-59 months and 24-59 months) was foreseen as a challenge for health workers and volunteers at the post level, as determining the correct age of the child would be left to the caretaker report and screener judgment. Furthermore it is sometimes difficult to distinguish the different age groups visually especially malnourished and under-weight conditions are prevalent. It was agreed that a screening form would be developed for use by the screener for each child at entry to the post, outlining the interventions to be given for the specific age group, as one of the measures to curb in appropriate administration of the interventions.
    - The integration of Vitamin A, deworming and nutritional screening in selected woredas required an increase in the human resources to provide all the interventions. A range of 5-9 personnel was required at each vaccination post depending on the package to be delivered. Each region therefore had to plan for additional manpower if not readily available from the routine workforce, such as use of personnel from health training institutions.
    - The EOS program develops annual work plans for activities conducted on a 4-6 month basis. The SIA micro plan therefore had to be integrated with the EOS micro plan. A decision as to which regions which regions were integrating activities was delayed in some instances which delayed finalization of the integrated micro plans (such as Oromia region)
4. Federal level intervention is needed to address some border areas for planning for the SIA.

4.3 Training

4.3.1 Preparations for Training

Under the stewardship of the PTME subcommittee of the National Task Force, the measles SIAs field guide used in the previous follow up SIAs was reviewed in depth and updated to include updated technical information and findings from the Best Practices workshop.

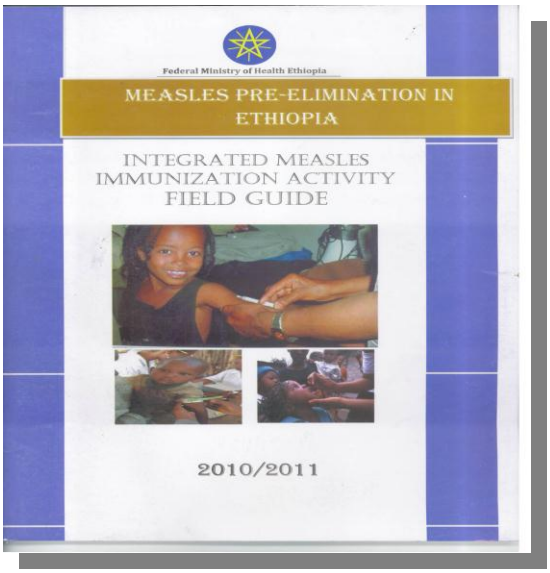


Fig 13. Integrated measles SIAs field guide.

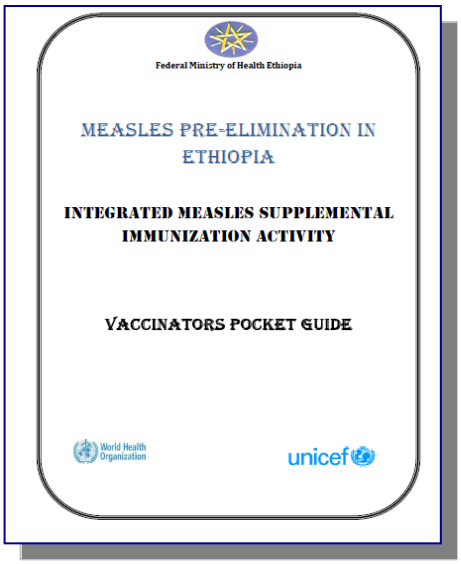
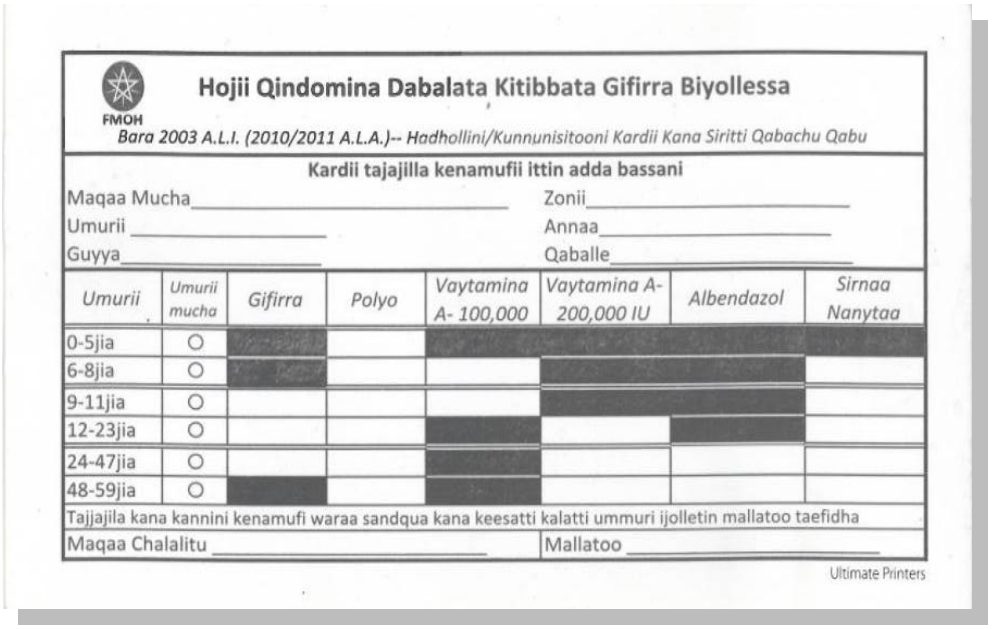


Fig 14. Integrated SIAs vaccinators' pocket guide.

Each subcommittee was tasked to review the field guide, revise and update where necessary, taking into consideration the best practices identified for the SIAs. Harmonization meetings were held at national level involving all subcommittee members to critically review and discuss the field guide.

An abridged pocket guide for vaccinators was also developed to simplify the information for use by the vaccination teams. The pocket guide was translated into the four main local languages before printing: Amharic, Oromiffa, Somali and Tigringa. A screening card for use at entry into the vaccination post for each child to identify the appropriate interventions to be given based on the age, was developed and translated into Amharic, Oromiffa and Somali.



FMOH

Hojii Qindomina Dabalata Kitibbata Gifirra Biyollessa

Bara 2003 A.L.I. (2010/2011 A.L.A.)-- Hadhollini/Kunnunisitooni Kardii Kana Siritti Qabachu Qabu

Kardii tajajilla kenamufii ittin adda bassani

Maqaa Mucha_____ Zonii_____

Umurii _____ Annaa_____

Guyya_____ Qabalie_____

Umurii	*Umurii mucha*	*Gifirra*	*Polyo*	*Vaytamina A- 100,000*	*Vaytamina A- 200,000 IU*	*Albendazol*	*Sirnaa Nanytaa*
0-5jia	○						
6-8jia	○						
9-11jia	○						
12-23jia	○						
24-47jia	○						
48-59jia	○						

Tajjajila kana kannini kenamufi waraa sandqua kana keesatti kalatti ummuri ijolletin mallatoo taefidha

Maqaa Chalalitu _____ Mallatoo _____

Ultimate Printers

Figure 15. Integrated Measles SIAs screening card in Oromiffa language.

To identify issues to be addressed during training and social mobilization, a knowledge, attitudes and practice (KAP) survey was conducted among health workers and community members during July-August 2010 with the technical and financial support from WHO. Four regions were selected for the KAP survey (Oromiya, SNNPR, Addis Ababa and Somali), from which 8 zones and 20 woredas were purposely sampled from Oromia, SNNPR, Somali and Addis Ababa based on routine EPI performance, frequency of outbreaks and urban/ rural representation. 165 health workers were proportionally sampled from the different levels of service delivery and in-depth interviews conducted as well as observations at facility level. 80% of the sampled health workers were health extension workers at health post level while 20% were nurses at health centers and hospitals. The survey identified gaps in knowledge and skills among health workers, which was useful in tailoring the development of the training materials[12]. The main conclusions of the survey included:

- Only one third of the health workers had ever received training on EPI and cold chain management
- 55% of health workers in the four regions knew the importance of additional doses of measles vaccine. However, more than 85% of them have positive attitude towards SIAs.
- 90% of the health workers did not know how to estimate vaccine and supplies needs.
- 71% of the health institutions had encountered shortage of at least one of the vaccines in the last 12 months and stock out of BCG, polio and the pentavalent vaccines were most common.

[12] KAP Survey Final Report, August 2010

- 20% of health institutions (majority being in Oromiya region) do not monitor the temperature of refrigerators daily.
- In 21% of the health institutions visited (majority being in Oromiya region), vaccines are not stored properly.
- Only 57% of health workers observed during vaccination services explained about the vaccines being administered to the caretakers

Training was planned to take place one month prior to the SIAs dates of implementation. The national PTME sub-committee developed a cascaded training plan outlining the dates for training at each level and the target participants and facilitators for each phase (2010 and 2011). The plan included an agenda and key topics for discussion at each level, time allocation and training materials to be used. Each subcommittee then developed the appropriate training materials which were discussed centrally as a group for peer review before finalization and commencement of the cascaded training activities.

Pre and post test questionnaires were developed for each cadre of implementers (Facilitators, Supervisors and Vaccinators), through a consultative and review process at central level (*see field guide for pre and post test questionnaires)*. Evaluation tools were also developed to capture the feedback from participants on the quality and organization of each session and the training as a whole. Pre/Post- test answers were evaluated for success of the training, and post-test results were used to identify staff with knowledge gaps that either required greater supervision or if they were not appropriate to be utilized during the planning or implementation.

4.3.2 Central Level Training

The central level training of trainers (TOT) workshops were held on 20-22 September 2010 and 26-27 January 2011 in Addis Ababa. The training was officiated by the FMOH.

The objectives of the TOT workshops were:

- To provide orientation to participants on the integrated measles SIAs.
- To strengthen the capacity of National SIA Facilitators to provide high quality cascaded training for coordinators, supervisors and vaccination teams.
- To discuss the roles of National Facilitators in the SIAs including a pre campaign assessment.
- To discuss the plan for 2nd and lower level training activities.

In the 2010 TOT, a total of 75 participants attended the training workshop in Addis Ababa and included 60 National SIAs facilitators jointly recruited by WHO and UNICEF, FMOH, WHO, UNICEF, CORE GROUP and Lions Club. In the 2011 TOT, a total of 42 participants attended the workshop including 30 National SIA Facilitators recruited by UNICEF and WHO.

As a best practice, the participants in the 2010 TOT were divided into groups of 20 - 25 participants each, for better participation and facilitation. The methods used for the training comprised of introductory presentations by the facilitators, plenary discussions, role play, practical exercises and group work. Practical demonstrations on reconstitution of measles vaccine and administration of the interventions and post organization were done. Reference was made to the SIAs field guide provided to each participant as well as the SIA monitoring tools. Some feedback on the content of the field guide was provided by the participants that required editing following the training. These edits were included in the final version of the guide.

During the Phase II TOT, experience gained from field reports and the post-SIAs review meetings identified gaps in the planning and implementation process. Therefore, emphasis during the Phase II TOT was areas such as screening, finger marking and use of recording formats.

At the end of each session, an evaluation form was provided to each participant to assess the quality of the facilitation, training materials, group participation, and use of practical experiences, among other criteria. In addition, comments were solicited on the evaluation on areas that required greater attention than provided; these gaps were given further attention in later sessions. The overall organization of the day session was also assessed.

Figure 16. National Training of Trainers (TOT), September 2010, Addis Ababa.

A pre and post test was administered to all participants. The overall scores indicated an improvement in performance between the pre and post test. In the 2010 TOT, a range of 30-100% was obtained in the pre test with an average score of 77%, while in the post test a range of 55-100% was obtained with an average score of 84%. Questions that were poorly answered in the pre test were noted and emphasis placed on these aspects during the course of the training. It was particularly noted that the EOS questions were poorly answered by participants. Three (3) Facilitators did not achieve the recommended post test score of 75% in the first round. As per the field guide, additional orientation was provided to the 3 facilitators. In the 2011 TOT, a range of 35-100% was obtained in the pre test with an average score of 77%, while a range of 75-100% with an average score of 89% was obtained in the post test. All facilitators achieved the pass mark in the post test.

A daily review meeting to discuss the training activities was held by the trainers at the close of each day including review of session evaluation findings. The plan for the next day was also discussed. Feedback from the central level training was used to refine the training process and materials before commencement of regional level training.

4.3.3 Regional and Lower Level Training

Regional level training was conducted on 30 September – 2 October 2010 and 2-4 February 2011. Four (4) regional workshops were held in Adama, Bahir Dar, Awassa and Jijjiga targeting the 7 regions

scheduled for the 2010 SIA; and 4 regional workshops were held in Summera, Assosa, Gambella and Mekelle for the 2011 SIA target regions. A total of 427 participants were targeted for the regional level training and were comprised of RHB Officers, Zonal level Coordinators and partners. The workshops were facilitated by central WHO and UNICEF officers as well as selected SIA Facilitators.

A standard agenda and training materials developed at central level were used for the regional workshops. Similar to the central level training, participants were divided into groups to maintain the recommended trainer: trainee ratio was 1:25, to allow for a manageable number of trainees per session. In addition, standard pre and post tests as well as evaluations were instituted at each of the workshops.

Following the regional workshops, SIAs Facilitators (assisted by WHO and UNICEF Field Officers) were tasked to coordinate and facilitate zonal and woreda level training.

Key points on training:

1. The effect of the number of interventions to be given on the quality of the SIAs was a concern by participants during the training. Some Woredas planned to provide all interventions. There was therefore need for close attention in the training process to ensure that quality is not compromised.
2. Screening of all children to determine the interventions to be given was identified as a critical step of the implementation process. It was however a concern that distinguishing the age groups would be a challenge given it would rely on recall of the mother and judgment of the vaccinator.
3. The EOS guideline for administration of Vitamin A contradicts a separate field guide that prohibits administration of Vitamin A to oedematous children. There is need for harmonization of the guidelines.
4. SIAs Facilitators have vast experience in coordination of previous SIAs. Their involvement in finalization of training materials may need to be considered in future SIAs.
5. Consultation between trainers and participants allowed an opportunity to address issues that were not clear in the training.

4.4 Advocacy, Communication and Social Mobilization

Under the stewardship of the central social mobilization subcommittee, a plan for advocacy and mobilization activities was developed. The plan included a budget and time line for implementation of activities.

4.4.1 Advocacy

Key stakeholders for engagement in the SIAs were identified by the national Task Force. These stakeholders included RHB Presidents, RHB Heads/ teams, Women and Youth Groups, Pediatricians/ Private Sector, political leaders at all levels and decision makers. Several sensitization activities were undertaken, particularly using the opportunities of planned meetings.

Members of the national coordination team conducted advocacy visits at various levels to sensitize professionals and authorities about the SIAs. These included:

- Annual Meeting of the Ethiopian Pediatric Society: 29 July 2010
- Meeting of Regional Presidents: August 2010
- Meeting of Women's Group Association: August 2010
- Annual Review Meeting of the Federal MOH including all Regional Health Bureaus: 12-15 October 2010
- Sensitization meeting organized for clinicians in Addis Ababa: 15 October 2010.
    - A half-day sensitization meeting that was facilitated by Addis Ababa RHB and WHO to discuss the SIA, routine EPI and surveillance issues. A total of 30 private sector officials attended the sensitization meeting.

Key aspects of the discussions during these various sensitization meetings centered on justification for the SIAs, ongoing preparations and the role of the stakeholders in advocacy and participation in the SIAs.

An advocacy brief on the SIAs outlining the rationale for the SIA, with regards to the unvaccinated children and the relevance of measles control in relation to meeting MDGs, was developed and shared at central and regional level.

The Task Force planned and conducted advocacy visits to the RHBs in 9 regions: Oromiya, SNNPR, Amhara, Somali, Addis Ababa, Tigray, Afar, Gambella and Benshangul Gumz led by Senior Management

of the FMOH as well as partners (WHO, UNICEF, CORE GROUP and Lions Club). The objective of the advocacy visits was to discuss the status of preparations for the SIA and advocate for timely implementation of planned activities including coordination, and advocate with available stakeholders for support. Feedback was provided to the National Task Force from the advocacy visits.

Figure 17. Advocacy visit to Regional President of Gambella Regional State, September 2011.

Figure 18. Advocacy visit to SNNPR RHB, September 2010.

4.4.2 Communication and Social Mobilization

In order to develop evidence-based communication messages, the KAP survey, discussed above, conducted in July-August 2010 targeted communities in addition to health workers. 17 focus groups

discussions (FGDs) were conducted among caretakers in rural and urban settings. The key findings of the community FGDs are summarized below:

- Caretakers sampled in all study sites in the four regions know about measles and its typical symptoms.
- Majority of the caretakers in the four regions considered measles as a severe and deadly disease.
- Majority of the caretakers sampled know the benefits of the measles vaccine and have had their children vaccinated for measles and other diseases. However, many caretakers in the rural communities in Somali region do not vaccinate their children fully due to unawareness about the benefits of measles vaccine, fear of side effects and inaccessibility to services due to frequent mobility of the caretakers. Furthermore illiteracy, lack of awareness and fear of side effects of vaccines among some rural and remote communities of SNNPR and Oromiya were identified as major barriers of immunization.
- Almost all caretakers sampled in the study sites do not know the importance of supplementary measles doses.
- Most caretakers in the four regions believed that children with measles should be treated at home by traditional means such as coffee ceremonies, application of herbal drugs and hiding the sick children.
- Health workers are the major source of information about measles (and immunization in general) for most people in the four regions. Mass media such as radio, and TV do not have significant roles in the transmission of educational messages about measles in the four regions, even radios are available.

Based on findings from the KAP survey, messages were developed targeting the gaps identified. The messages focused on measles, benefits of vaccination, routine immunization and the SIA (dates and target groups). There was need for translation of all messages into the four main languages: Amharic, Oromiffa, Tigringa and Somali. Radio and television messages started airing on national media on 7 October 2010. Several channels were identified for communication of the SIA messages: media (radio and television), IEC materials (posters, leaflets for school children, billboards) and mobile van films. A national television talk show was held in October 2010 presided by the FMOH, WHO and UNICEF, to educate the public further on measles and advocate for full participation in the SIAs. The national social mobilization committee developed a guide for Dagu, Ider, religious leaders and community conversation at a kebele level.

Figure 19. A sample of the IEC materials produced for the integrated measles SIAs. 2010

Community mobilizers were identified to conduct mobilization in their areas of assignment. The mobilizers included community health worker volunteers, town/ public criers and Kebele Chairmen. Partners such as L-10 K and CORE GROUP have a net work of community mobilizers who were identified to support house to house mobilization for the SIA. Training of community mobilizers was scheduled for 6-7 days before the SIA to allow for ample time to conduct the mobilization activities.

Key issues regarding Advocacy and Communication:

1. The several local dialects in Ethiopia required translation of all communication materials. 4 main languages were selected and the support of regional level communications officials in the translation process was crucial to ensure quality work. The translation process required adequate time.
2. The pre-SIA KAP survey was useful in generating evidence-based messages to address specific community concerns and gaps in knowledge about immunization and supplementary vaccination.
3. A diversity of communication channels were identified in the planning phase based on prior knowledge and experience on effectiveness as well as the need to ensure that the SIAs messages reach all target groups.
4. Sensitization and engagement of the political leadership and administration at all levels through advocacy visits was quite important in assuring high-level support for the success of the SIAs.

4.5 Logistics Management

The national logistics Sub-Committee led by Pharmaceuticals Fund and Supply Agency (PFSA) held its first meeting on the 14 May, 2010 with the aim of reviewing the logistics component of the proposed best practices. A logistics distribution plan was developed centrally, quantifying all logistics needs at the zonal level. Following discussions at FMOH, a decision was taken to mandate PFSA to distribute the logistics inputs to the woreda level through its regional hubs.

On August 26 2010, the Logistic Subcommittee arranged an extraordinary meeting between the Director General of PFSA, Mr. Haileselassie Bihon and the FMOH Disease Prevention and Health Promotion Directorate (Dr. Keseteberhan Admassu) and the Urban HPDP Directorate (Dr. Neghist Tesfaye) as well as WHO and UNICEF Logisticians to discuss the details of the proposed logistics distribution plan. The challenges of PFSA modalities of distribution were discussed at length. The anticipated challenges included transport capacity, ice pack freezing capacity, cold boxes requirement (1,600 cold boxes were needed), time required to pack the vaccine at central level, and the location of the various logistics to be distributed (different items are at different locations at central level). PFSA Management indicated their previous experience in distribution of logistics items to woreda level, such as ARVs and bed nets, and expressed their utmost commitment to ensuring that the operation runs smoothly. The following actions were agreed:

1. PFSA would use its structure in the country with regional hubs to carry out this important exercise.
2. A detailed logistics action plan should be developed by the Logistics Subcommittee that includes the routes of distribution, time line and required inputs.
3. Communication should be made with each woreda and zone prior to the vaccine distribution.
4. Regular meetings need to be conducted to ensure smooth logistics distribution.
5. During distribution, orientation of drivers and responsible officers will be conducted.
6. For woredas with inadequate storage capacity, the neighboring woreda storage capacity will be used.
7. PFSA would make dry storage space available for all dry materials including formats and IEC materials so that all items are stored at PFSA.

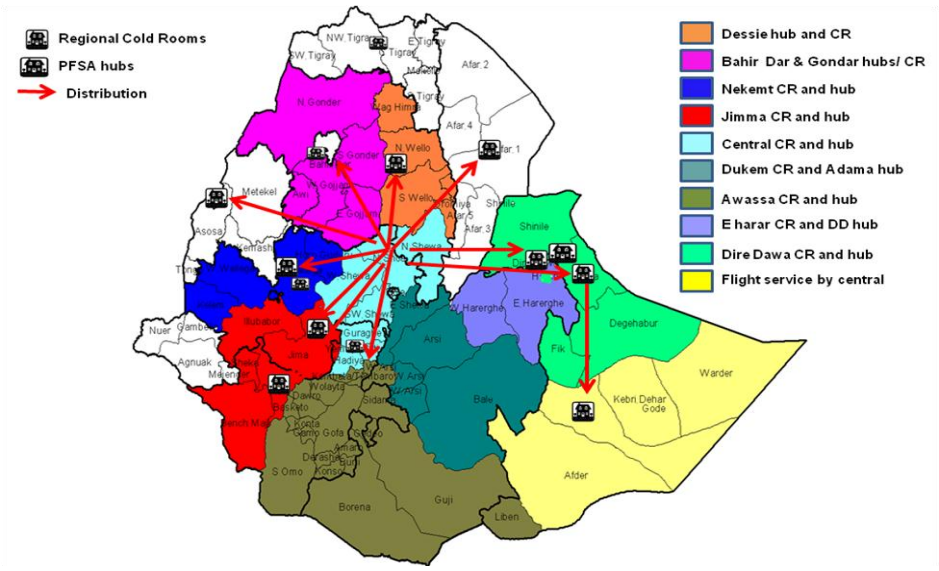


Figure 20: Location of Regional and PFSA Hubs utilized during the Ethiopia Measles SIA

Coordination of estimation, procurement, packaging and distribution of all logistics requirements for the different interventions of the SIA was crucial and required meticulous planning by woreda level. Logistics estimates were cross checked with the micro plans. A total of 9 regional cold rooms and 7 PFSA dry stores were used as hubs for the distribution of logistics. (Figure 20, Table 7).

REGION	Sum of OPV required (Doses)	Sum of Measles Vaccine required (Doses)	Sum of Ad Syringes	Sum of Mixing Syringes	Sum of Safety Boxes	Sum of Cotton roll 500 gm (2 gm per child)	Sum of Scissors	Sum of Finger markers	Sum of Vit A, 100,000IU capsules	Sum of Vit A, 200,000IU capsules
Addis Ababa	503,259	336,425	336,425	33,643	3,701	1,153	303	1,479	83,141	297,819
Afar	259,343	173,369	173,369	17,337	1,907	594	188	919	42,845	153,474
Amhara	3,163,746	2,114,942	2,114,942	211,494	23,264	7,251	2,321	11,334	522,668	1,872,244
Ben gumz	123,294	82,421	82,421	8,242	907	283	83	407	20,369	72,963
Dire Dawa	63,008	42,120	42,120	4,212	463	144	37	182	10,409	37,287
Gambella	56,408	37,708	37,708	3,771	415	129	40	198	9,319	33,381
Harari	33,697	22,526	22,526	2,253	248	77	24	119	5,567	19,941
Oromiya	4,991,415	3,336,727	3,336,727	333,673	36,704	11,440	3,640	17,778	824,609	2,953,824
SNNP	2,764,644	1,848,145	1,848,145	184,815	20,330	6,336	2,010	9,817	456,734	1,636,063
Somali	815,865	545,400	545,400	54,540	5,999	1,870	592	2,892	134,785	482,813
Tigray	792,947	530,080	530,080	53,008	5,831	1,817	570	2,786	130,999	469,251
Grand Total	**13,567,624**	**9,069,863**	**9,069,863**	**906,986**	**99,768**	**31,097**	**9,810**	**47,911**	**2,241,446**	**8,029,059**

Table 7: Logistics requirements by region, Integrated Measles SIA, Ethiopia, 2010/11

All vaccines for the SIAs (measles and polio) were available in the country by August 2010 except supplies for the SIAs phase II scheduled for February 2011, which were shipped in January 2011. Distribution of vaccines and related supplies to regional hubs began on 27 September (3-4 weeks prior to the SIAs) for phase 1. At regional hub level, supplies destined to go to Woredas were prepackaged as per the micro plans and distribution done.

Delays in the translation of reporting formats, pocket guides and IEC materials for the 2010 SIAs led to further delays in the distribution of other supplies until October 2010. However these delays were avoided in the phase II SIAs, and all materials were distributed well ahead of implementation as per the schedule. Except for some mal-distribution in the materials printed in different languages, the whole logistics distribution went smoothly.

Key points on logistics management:

1. Distribution of logistics from central to Woreda level for the first time necessitated additional and meticulous planning given the number of Woredas (800) in the country. In addition, coordination of all supplies required for the multiple interventions added to the complexity of the logistics preparations.
2. The translation of training and communication materials into 4 local languages delayed the printing process resulting in late deliveries during the 1st phase.
3. Variations in planning figures between the central and zonal level for some zones, created a challenge in the logistics planning.

4.6 Resource Mobilization

The estimated total budget for the SIAs was **US$ 11,836,105** (US$ 5,371,901 for vaccine costs and US$ 6,464,204 for operational costs). The Measles Initiative provided US$ 3,465,780 for the operational costs, channeled through WHO and UNICEF, as well as the measles vaccines required. In addition US$ 500,000 was provided for the measles SIAs evaluation through UNICEF.

The Resource Mobilization Subcommittee, under the leadership of the Director of the Resource Mobilization Directorate of the FMOH, prepared an advocacy brief that was formally shared by the FMOH with local partners to solicit financial support.

The Global Polio Eradication Program provided all the required OPV doses and US$ 750,000 towards the operational costs. Local Nutrition Partners provided US$ 1,502,205 through UNICEF for regions conducting integrated EOS activities. The gap of US$ 746,219 was funded by the Federal Government of Ethiopia (Table 8). In addition, all regions were requested to contribute to the operational costs for waste management and drugs for the management of AEFI. The average cost per child was US$ 0.92.

Additional support was received in kind from the Lions Club International for advocacy activities in SNNPR and from Rotary International for printing of materials. Logistics support was provided by CORE GROUP in 67 woredas in 7 regions of operation.

Table 8: Funding Sources for the operational costs of the integrated Measles SIA, 2010

Item	Total Budget (USD)	FMOH	Measles Initiative		Nutrition Partners (EOS)	Global Polio Initiative
			To WHO	*To UNICEF*		
Vaccine & injection materials	5,371,901			3,345,097		2,026,804
Operational costs	6,464,204	746,219	2,101,540	1,364,240	1,502,205	750,000
Grand Total	**11,836,105**	**746,219**	**2,101,540**	**4,658,097**	**1,502,205**	**2,776,804**
Target population (< 5 yrs)	12,859,245		Cost per child	$0.92		

Key points regarding resource mobilization:

1. A policy decision by the FMOH not to pay health extension workers for activities conducted in their areas of assignment was a concern by regions, as it was felt would impact negatively on the SIAs. It was resolved that HEWs would only be paid if required to provide services outside their areas of assignment and on weekends. The budget was therefore adjusted accordingly.
2. Timely disbursement of mobilized resources from national level was hindered in phase 1 by outstanding liquidations of previously disbursed funds from partners to regional level. As such, delays in disbursement of funds were experienced particularly in SNNPR. Flexibility in utilization of funds available at regional level assisted in availing start up funding for the planned SIAs.
3. Disbursement of funding from regional to operational level was delayed in several regions. However, this did not delay implementation of activities.

4.7 Monitoring and Evaluation

4.7.1 Preparations for Monitoring and Evaluation

The PTME sub-committee, in coordination with the National Task Force, was designated to develop the monitoring and evaluation plan for the SIAs. The monitoring and evaluation framework for the SIAs was drafted during the planning phase detailing all aspects. (Table 9)

Monitoring and Evaluation Activities Focused on Assessing the Implementation of the SIA					
Type of M & E activity	**General Objectives**	**Tools to be used for data collection**	**Methods to be used**	**Geographic areas targeted**	**Type of data to be generated**
KAP Survey of Health workers and Community Focus Group Discussions on SIA (and Routine Immunization)	To identify knowledge gaps among health workers and the community to be addressed during training and development of social mobilization messaging.	Structured Survey and Focus group discussion	interviews and focus group discussions	selected woredas in urban, agrarian and pastoralist areas	Survey results, FGD summary regarding KAP of Measles SIAs and RI
Pre-campaign Supervision	To improve on the quality of preparation for the SIAs	Pre-campaign Checklist	Observation and consultation	all areas targeted for SIAs	Completed Checklist
Intra-campaign Supervision	Ensure high quality implementation	Intra-campaign Checklist	Observation and consultation	all areas targeted for SIAs	Completion of Y/N Checklist
Independent monitoring of SIAs activity	Identify areas missed for mop-up vaccination activities. Assessment is independent for validation purposes	Independent Monitoring Tool (Modified RCM)	House-to-house finger marking evaluation	Areas at risk of being missed (hard-to-reach, poor routine…)	Area meets expected coverage, also limited social mobilization and RI data
Rapid convenience monitoring of SIAs activity	Assist supervisors assess situation on the ground to identify areas missed for mop-up vaccination activities	Rapid Convenience Monitoring Tool	House-to-house finger marking evaluation	Areas at risk of being missed (hard-to-reach, poor routine…)	Area meets expected coverage, also limited social mobilization and RI data
Administrative coverage	Quantify the number of children receiving the various services during the Integrated SIA.	Pre-printed Reporting formats	Tally and summary at all levels	All areas targeted for SIAs	Reported number divided by target populations
Coverage survey- regional estimates of coverage	Provide regional level estimates of coverage of measles and other interventions.	Questionnaire, surveyors checklist and forms	Household cluster survey	Cluster sampling of randomly selected areas	Demographics; Coverage data for interventions
Post-campaign debriefing	Evaluation of the implementation of the SIA at all levels	Technical report format	Desk Review	All areas	Report
Monitoring and Evaluation Activities Focused on Identification of Best Practices					
Type of M & E activity	**General Objectives**	**Tools to be used for data collection**	**Methods to be used**	**Geographic areas targeted**	**Type of data to be generated**
Evaluation of the impact of routine immunization on the SIA	Use data collected from HW KAP-FGD/Communication KAP study to assess the impact of the SIA on Routine immunization. The post-SIA survey assess change/impact	Structured Survey and Focus group discussion	Interviews and focus group discussions	Purposively selected woredas in urban, agrarian and pastoralist areas	Survey results, FGD summary regarding KAP of Measles SIAs and RI
Monitoring of the implementation of the best practices identified	Compilation and evaluation of monitoring data during the campaign to identify how activities were implemented	Pre-/Intra-campaign checklists (Y/N type)	Observation and consultation	All areas targeted for SIAs	Best practice implementation data
Measles surveillance data	Evaluation of surveillance data on measles epidemiology. Evaluation on age distribution, and size of outbreaks will be done.	Standard Case Based Reporting formats	Historical data review	All areas	Surveillance data, age distribution, outbreak number and size
Identification and evaluation of best practices	Independently evaluate the implementation of a set of selected best practices for the SIA	Questionnaire, evaluators checklists and forms	Interviews, focus group discussions, observations	Sampled kebeles throughout areas targeted in Phase I	Demographics; kebele level coverage compared to implementation of best practices

Table 9. Matrix of the Monitoring and Evaluation activities for the best practice measles SIAs. Ethiopia.

Monitoring tools for the SIAs were developed centrally and included tally sheets and reporting formats for each level and for each intervention (*refer to Integrated SIA Field Guide*). The formats were translated into 4 local languages before printing. Checklists were developed for pre and intra campaign assessments. Supervisors were identified at each level and orientation provided on the monitoring formats during the training sessions.

During the preparations for the Phase 2 SIAs, a plan was made to conduct daily monitoring of campaign performance intra-campaign and reporting to the next level through text (sms) messages. Phone cards were procured by the FMOH and distributed to the 4 regions for supervisors within network coverage areas. A standard text message containing the necessary information was designed and shared with supervisors during the training sessions.

4.7.1 Central Level Coordination

Monitoring of the overall planning process was completed by the Central Level Task Force. During the weekly coordination meetings, the Gantt chart developed was reviewed and a situation update was provided by all sub-committees and regions (through the FMoH case teams). For areas that needed additional support, a clear plan of action and individual was assigned by the chairperson to support the process. Results of action points were reviewed at each subsequent meeting.

4.7.2 Pre Campaign Assessments of Preparation

Facilitators recruited by WHO and UNICEF were tasked to conduct pre-campaign assessments at zonal, woreda and health facility levels with the aim of assessing the readiness for the campaign in all aspects. 2 assessments were done: one month and one week prior to the SIA using the standard structured check list [*see Integrated Measles SIA Field Guide*]. Emphasis was given to hard to reach (geographically demanding and also conflict areas), areas with previous outbreak and high risk populations (camps, urban slums, displaced people, nomadic populations etc).

Information collected from the first assessment (3-4 weeks prior to implementation) was sent to central level, analyzed and feedback provided. The information was shared with the central supervisors before deployment to the field. A total of 134 reports were received in phase 1 for the assessment conducted 3-4 weeks prior to the SIAs.

Analysis of the reports indicated that 45% of zones/ woredas sampled had functional Task Forces in place for coordination; 38% had adequate functional refrigerators in place at woreda level; and only 3% had started mobilization activities. The findings from the 1st pre-campaign assessment were greatly affected by the quality of the responses from the Facilitators deployed to the field and timeliness of submission of the data to the central level. The Facilitators in the field were provided feedback on the

gaps identified as well as the quality of the assessment, and instructed to provide additional support to geographic and technical areas that were not fully or partially prepared in the first assessment to ensure the specified area is ready for the SIAs. The necessary logistics and managerial support was provided to these woredas to bring them up to the expected level in the weeks leading up to the SIAs. An improvement was observed in the level of preparations for the SIAs in the 2nd round assessment conducted 1 week prior to the SIAs.

4.7.3 Independent Monitoring

Independent monitoring provides an outside perspective on SIAs achievements as data collection is performed by a cadre of individuals assigned only to gather monitoring data, and are not involved in the implementation of the activities; in addition monitors, unlike other monitoring methodologies, can focus on monitoring as they do not have assignments to perform other SIA support activities. Monitoring data from the independent monitors complement other sources of information on the SIAs, balancing independent assessment (like the coverage survey) with actionable real time data (like the rapid convenience monitoring).

The selection of the independent monitors emphasized on their educational level (minimum level being diplomas), their independence from the health system and familiarity with the area and the local language. Monitors were expected to be local to the assigned woreda, or familiar with the woreda of assignment. WHO staff trained and supervised the monitors during a one day training the week prior to implementation. The monitors were instructed to identify areas with high risk of poor SIA coverage such as hard-to-reach areas, vulnerable populations, areas with poor routine immunization coverage or areas that performed poorly during previous SIAs. Monitoring occurs in areas already covered by the vaccination team, both during the SIA (intra-SIA) and after the SIA (post-SIA). The monitors were expected to evaluate if the target population was reached and report their findings to local government officials to address if the area needs to be revaccinated or not.

The sampling methodology is a modified Lot Quality Assurance approach, leading to a categorization of whether an area has been adequately reached or not. In each area, children are evaluated both inside and outside of the house. “Inside the house” refers to evaluating the vaccination status of children in the target population by monitoring moving from house to house; “outside the house monitoring” involves evaluating children where they may gather outside the house (for example, playing in the

street, at water collection points, etc). Data is also collected on social mobilization and reasons why children missed the SIAs doses if they did.

During phase I, one monitor was assigned per Woreda for the independent monitoring process. In phase II, monitors were assigned to a zone. Standard data collection formats were developed to assess measles and polio vaccination, reasons for missing the vaccination services during the SIAs and sources of information. A total of 395 Woredas (56% of all Woredas in the country) were sampled for the post SIA independent monitoring exercise.

4.7.4 Post-SIAs Evaluation

Following the consultative meeting in March 2010, the PTME sub-committee further refined the best practices and identified those that were feasible to analyze; indicators were developed to monitor the implementation of each best practice. The plan for the evaluation of these best practices included pre-campaign, intra-campaign and post-SIAs phases. The post SIAs evaluation included a coverage survey.

A local firm, MEDCO Bio-Medical College, was contracted through UNICEF to undertake components of the evaluation of the best practice SIAs. Additionally external technical support was provided by UNICEF HQ and CDC for the preparations of the evaluation.

4.8 Strengthening the Routine Immunization System through SIAs

SIAs provide an opportunity for strengthening the routine immunization system in several aspects, with minimal or no additional resources. There are compelling reasons to consider the potential for synergy between measles mortality reduction/elimination activities, including SIAs planning and implementation, and routine immunization services. However, this opportunity has not been optimally utilized in previous SIAs. A key component of the Best Practice Measles SIAs Evaluation was to document how the SIAs have contributed to strengthening the routine immunization system. The evaluation included the pre-SIAs KAP survey, intra-campaign monitoring and post-SIAs KAP survey (including focus group discussions at community level to determine how SIAs impacted on community perceptions about routine EPI or measles). Funding was provided by WHO- AFRO for these evaluation activities.

Through a consultative process at national level involving Government, Regional level representatives and partners, in March 2010, a set of best practices were identified for implementation to strengthen the routine immunization programme through the scheduled measles SIAs. These p[ractices were categorized as follows:

1. Planning
2. Training
3. Logistics management
4. Advocacy and social mobilization
5. AEFI monitoring and management
6. Surveillance
7. Monitoring and evaluation

The micro planning process aimed at providing detailed plans for reaching all target children and identifying stakeholders at all levels to support EPI. Coordination structures (Task Forces) were established at all levels through which mechanisms of strengthening the routine system and sustaining the efforts was discussed.

The KAP survey among health workers and the community, conducted in August 2010, provided relevant information as to the gaps in the knowledge and practices of health workers in routine immunization. A total of 165 health facilities were sampled in 11 woredas of 8 zones across 4 Regions. These were selected randomly, and health workers were provided with structured anonymous questionnaires to evaluate their knowledge, attitudes and practices in immunization and regarding

measles control. The same 11 woredas were targeted with qualitative studies looking into the knowledge and attitudes of the public to immunization. These studies were done in the form of focus group discussions. See table 10.

The SIAs training materials were developed to address the gaps identified in the KAP survey. A one-hour session dedicated to routine EPI was included in the training agenda for all levels, during which EPI policy guidelines and other aspects were discussed. Theoretical and practical demonstrations on reconstitution of vaccines, communication during sessions, AEFIs and their management and surveillance were purposely included in the training agenda at all levels. Advocacy and social mobilization materials were tailored based on communication gaps identified in the KAP survey, with a strong component on sensitization about measles, the benefits of the routine vaccination programme and the need for completing of the immunization schedule.

Region	Zones	Number of Health Facilities sampled	Woreda	Number of FGDs
Oromiya	East Hareghe	44	Kersa	1
			Haromaya	2
	West Arsi	42	Shashemne	1
			Arsi Negele	1
Addis Ababa	Akaki	12	Akaki	2
	Gulele		Gulele	2
SNNPR	Sidama	25	Boriche	2
	Wolaita	25	Damot Pulassa	1
			Offa	1
Somali	Jijiga	7	Jijiga	2
	Shinile	8	Shinile	2
TOTAL		**165**		**17**

Table 10: Distribution of study health facilities and FGD sites, KAP 2010, Ethiopia

The effect of the SIA-related activities on the routine system was assessed 2-4 weeks post SIAs and a follow up assessment was planned 12 months post SIAs. The results from the first post SIA assessment indicated an increase in sampled health facilities with EPI micro plans and monthly monitoring of EPI activities. In all sampled regions, a larger proportion of health workers in the post-SIA survey knew the importance of additional doses of measles vaccine compared to the pre-SIA survey which was conducted in August 2010. The knowledge of health workers about the site of measles vaccine injection in SNNPR improved significantly in the post-SIA period compared to the pre-SIA period (63.6% in the pre-SIA vs.

95% in the post-SIA). Similarly, a higher proportion of health workers in Oromiya, SNNPR and Somali regions knew methods of estimating vaccine supply in the post-SIA period compared to the pre-SIAs.

At community level, it was noted that information about the benefits of immunization was received during mobilization for the SIAs. The attitude and practices of the community about measles immunization and vaccination in general changed compared to the pre SIA survey. Following the SIA, many people have a very positive attitude and willingness to vaccinate their children. Previously identified barriers of immunization such as fear of side effects are no longer obstacles for immunization in many settings. However, in some settings, information about routine immunization was not disseminated during the preparations for the SIA, notably in Sidama (SNNPR) and Shinile (Somali).

5. Implementation

5.1 Launching of the SIAs

The Best Practice measles SIAs were officially launched at national, regional and zonal levels. At national level, a press conference officiated by the FMOH, WHO and UNICEF was conducted on 20 October 2010. A national launch was conducted at the national palace on 21 October 2010, officiated by HE Mr Girma Woldegiorgis the President of the Federal Republic of Ethiopia, the Honorable Minister for Health, Rotary International President, Immediate-Past President and Lions Club Foundation Chairman, the WHO Representative, UNICEF Representative and other dignitaries. Regional level launching activities were presided by the Regional Presidents in Gambella, Afar, SNNPR, Somali region and other high level government officials in the rest of the Regions.

Figure 21. National level launch of the SIAs by His Excellency Mr Girma Woldegiorgis (President of the Federal Republic of Ethiopia), Dr Tedros Adhanom (Minister for Health), the President of Rotary International, Immediate-Past President of Rotary International, and the Chairman of Lions Club Foundation. October 2010;

"Inspite of the drastic global drop in polio cases, the current polio situation is unstable and potentially dangerous and thus stakeholders must be focused on efforts towards raising funds and breaking the polio campaign fatigue by involving the community" ***President Girma Woldegiorgis, The Ethiopian Herald, 22 October 2010***

Figure 22. Press briefing officiated by FMOH, WHO and UNICEF.

Figure 23. International Rotarians (top left), Lions Club Members, WR and UNICEF Deputy Representative (top right) at the National launching ceremony; Regional launching activities – President of Afar (middle left), Somali Region (middle right), Lions Club President in SNNPR (bottom left), Youth Club in Dire Dawa (bottom right)

Figure 24. Regional/ Zonal launching activities: Religious Leader in Tigray (top left), Head of Women's Affairs, Tigray (top right), North Gondar (bottom left), East Haraghe (right)

"7.7 million children under the age of five will be immunized during the campaign," ***Dr Neghist Tesfaye, FMOH, The Ethiopian Herald, 21 October 2010***

The official launching ceremonies received adequate press coverage in the national and regional television and radio channels, as well as in newspapers (Figure 25). In addition, a number of other social mobilization channels were used to announce the event and provide information to the public at the start and throughout the duration of the implementation of the SIAs. These efforts made use of a "multi-channel approach" as part of the "best-practices approach". These communication and mobilization efforts included announcements by town criers, recorded messages transmitted from mobile vans, house to house mobilization using Health Extension Workers and Community Volunteers, messages posted on billboards and through the distribution of IEC materials in the form of flyers, pamphlets, posters, banners etc. (Figure 26).

The Ethiopian Herald

Vol.LXVII No 035 | Thursday 21 October 2010 Tekemt 11, 2003

Ministry to launch national measles vaccination campaign

ADDIS ABABA (ENA) – The Ministry of Health said it has finalized preparations to launch a four-day national integrated supplementary measles vaccination campaign beginning from October 22, 2010.

Ministry Urban Health Promotion and Public Relations Director, Dr. Nigest Tesfaye told journalists yesterday that 7.7 million children under the age of five will be immunized during the campaign.

Vaccination against polio, vitamin 'A' and anti-parasite medicine will also be given to the children during the campaign, she said.

The campaign will take place in two rounds, she said, adding, the first round will take place in Addis Ababa City and the Dire Dawa Administration as well as in Harari, Amhara, Oromia, Somali and SNNP states.

The second round of the campaign will be carried out in Afar, Benshangul-Gumuz, Gambella and Tigray states.

Dr. Nigest said the ministry organized the campaign in collaboration with the World Health Organization (WHO) to avert the risk of measles outbreaks.

WHO MCH/EPI focal person, Dr. Pascal Mkanda said on his part WHO selected Ethiopia to pilot the "Best Practice" measles SIA so that lessons learned in Ethiopia will be used to improve the quality of campaign in Africa and beyond.

Dr. Pascal emphasizes the need to strengthen routine immunization to eliminate measles and eradicate polio, which is the main strategy to prevent children from vaccine preventable diseases.

He said WHO will continue technical and financial commitment to support efforts of the Ethiopian government in reducing unnecessary suffering of children from vaccine preventable diseases, achieve measles elimination and polio eradication.

WHO received 2.1 million USD from the measles partnership to support the campaign, he said.

Vol.LXVII No 036 | Friday 22 October 2010 Tekemt 12, 2003

President urges stakeholders to make utmost effort to end polio

BY ABIY HAILU

ADDIS ABABA - President Girma Wolde-Giorgis said stakeholders should reiterate commitments and make utmost efforts to end polio cases in the country.

Speaking at an event organized to renew commitment to "End Polio Now" campaign and launch the 2010 Best Practice Integrated Measles Supplemental Immunization Activities (SIA's) which is co-hosted by the Rotary International at the National Palace yesterday, President Girma said the world has traveled very far towards a polio free world – facing the last polio hurdle to end polio.

In spite of the drastic global drop in polio cases, the current polio situation is unstable and potentially dangerous and thus stakeholders must be focused on efforts to raising funds and breaking the polio campaign fatigue by involving the community, the President added.

Minister of Health Dr. Tewodros Adhanom on his part said that protection and prevention against vaccine preventable disease for children and mothers' health care are imbedded in the heath policy of the country and it has come a long way to make Ethiopia free of polio.

He also said the government together with partners has been engaged in strengthening the Polio Supplemental Immunization Programme since 1996 to ensure that 96 per cent of children in every district are reached with the necessary vaccine.

"Even though Ethiopia has made considerable progress in polio eradication, and was declared polio-free since 2008; still face financial and geographical challenges, primarily lack of complete control in boarder areas which are prone to regulate outbreaks and susceptible to importation of wild polio virus," the minister noted.

As such, Dr. Tewodros said, the Polio Immunization Integrated Supplementary Measles Vaccination Activities would be conducted in different areas of the country starting today targeting 13 million children between the ages of 0-59 month.

The campaign will also ensure the provision of polio vaccine, vitamin A, medicine as well as nutrition screening, it was learnt.

Meanwhile, ENA reported that President Girma called on Lions International Club to strengthen its support to Ethiopia toward its efforts underway to prevent measles.

While conferring with Lions Club International Chairman, Eberhard J. Wirts here yesterday, President Girma said the participation of the club in measles prevention campaign is appropriate.

He said the support being extended by the club in this regard need to be further consolidated.

Wirts said on his part that his organization and the Ministry of Health would launch anti-measles campaign.

He said the campaign would be launched in Hawassa City, capital of SNNP State, for one week as of today.

He also indicated that Lions Club International would launch anti-measles vaccination campaign

Figure 25. Coverage on the Ethiopian Herald daily newspaper, October 2011

Figure 26. Banners in Amharic (left) and Oromiffa (right)

""The demand and participation of communities and all health providers in the SIA was good. The increased demand was because of epidemics in some areas, the presence of urban health extension workers who contributed significantly to community mobilization and the different channels used for mobilization such as radio and television. The panel discussion on the measles SIA broadcasted on Ethiopia Television by Health Professionals also played a big role in educating the public and mobilization." ***Sister Helen, EPI Focal Person, Addis Ababa Regional Health Bureau.***

5.2 Implementation of the Integrated Measles Follow-up SIAs

The SIAs were implemented from 22-25 October 2010 (Phase I) and from 18-21 February 2011 (Phase II). Vaccination services were provided using fixed post, outreach and mobile team strategies.

Fig 27. Mobile vaccination team in Shinile, Somali region (left), and fixed post at a health facility (right), October 2010

Figure 28. Mothers and children in the waiting area, Woliata, SNNPR (left) and a Town Crier disseminating messages on the SIA at community level, Harari.

An estimate total of 178,320 vaccination teams were deployed across the country for the two phases of the SIAs. These teams included more than 66,870 health workers (including health extension workers). More than 72,870 volunteers were deployed to support the SIAs in social mobilization, crowd control, screening and recording activities at the service delivery post level. Vaccination activities at health posts were conducted by a team of 5-9 personnel depending on the package to be provided.

On the whole, a large turnout was observed during the first 2 days of the SIAs. Crowd controllers stationed at each post assisted with organization of caretakers and children at the post. In some areas, such as Addis Ababa, the vaccination service delivery posts were over crowded; this necessitated the opening of additional service delivery posts during implementation in some instances or extension of

the days of implementation to ensure all the target children received the services. The posts were organized to allow an organized flow starting with screening, the provision of supplemental vitamin A and deworming tablets, nutritional screening, and ending by the administration of OPV and measles vaccine. After each intervention was administered a volunteer would tally the intervention provided. In addition, finger marking was done after OPV and Measles vaccine administration.

Figure 29. Vaccination activities in Sidama (SNNPR) and North Gondar (Amhara Region), October 2011

5.3 Logistics Management

Supervisors deployed at each level were tasked to ensure that the necessary logistics were available and properly handled during the SIAs. Program managers practiced some flexibility in the movement of vaccine logistics between woredas/ zones/ regions during the course of the campaign in order to adequately address geographic areas with anticipated stock-outs. During the 1st phase, stock outs of measles and OPV were experienced mainly in SNNPR and some zones in Oromia, such as East Haraghe. The buffer stock available at central level was immediately deployed to regions reporting stock outs. The PFSA mobilized trucks that were on standby in order to cater for emergency deliveries. During the 2nd phase, no stock outs were reported at zonal level, though some Woredas had to redistribute their vaccine stocks in order to address gaps.

The waste management methods that were systematically employed during the SIAs included “burning and burying” of filled safety boxes in pits at health post level or incineration at health center level.

5.4 Monitoring and Supervision

5.4.1 Daily monitoring and review meetings

Supervision during the SIA was done by designated teams from RHB, ZHD and Woreda Health Offices, as well as team supervisors at the level of the service delivery post where 1 supervisor was responsible for 5 vaccination teams. An estimate total of 1,628 supervisors were deployed to the woreda level - an average of 2 supervisors per woreda, although some woredas had more that 2 depending on the need or risk.

Personnel and transportation resources from different government sectors outside of the Ministry of Health, and non-governmental organizations supported the supervision of the SIAs. These included people from the local Administration, Education and Agriculture sectors.

Some 240 supervisors/ monitors (including SIA Facilitators for the 2 rounds) were deployed from the central level from FMOH and partner agencies. Several partners participated in supportive supervision in the field:

- UNICEF
- WHO/Ethiopia
- CORE GROUP (7 regions)
- L-10 K (4 regions)
- IFHP
- Rotary International – 50 international Rotarians supported monitoring of the 2010 SIA
- Lions Club – International and local dignitaries supported activities in SNNPR
- External observers – Bill and Melinda Gates Foundation, American Red Cross, WHO/HQ, WHO/AFRO, UNICEF/HQ, UNICEF/ESARO

The established coordination mechanisms at each level were used during the course of the SIAs to monitor progress of implementation. At national level, a team led by FMOH followed up with Regions to obtain updates on a daily basis. The team included a logistician who was responsible for coordinating emergency deliveries to regions where necessary.

Daily reports were provided to the central team from the field by telephone or email. During the 2nd phase, mobile text messaging was employed to provide daily coverage results from the team supervisor level to the Woreda supervisors, and cascading up to zonal supervisors, regional level focal points and finally to the national level using a standard format. The monitoring approach worked in most areas of the regions implementing in Phase II except Benshangul-Gumz where the cellphone network coverage was problematic. Local VHF radio was used to transmit daily coverage performance in Benshangul Gumz.

Daily review meetings were conducted at woreda and zonal level involving partners to review performance, discuss challenges and devise solutions intra-campaign. Review meetings were expected to include government health officers, in addition to NGOs, facilitators, supervisors and administrators. The meetings attempted to monitor that every child is reached by reviewing coverage results against the targets, reviewing quantitative and qualitative supervisory and monitoring field data and vaccine stock information.

5.4.2 Rapid Convenience Monitoring

Rapid convenience monitoring (RCM) was conducted during the course of the SIAs and immediately after the conclusion of the SIAs. Monitoring was done by supervisors and National SIAs Facilitators, with the aim of identifying any missed children. Sampling of areas for RCM was based on those identified to have completed the activities or areas and populations considered to be at high risk, and hard to reach populations. The surveys typically began after the 2nd day of implementation. Feedback was provided to the necessary authorities for immediate action.

The RCM (and independent monitoring described below) was particularly useful in areas with inaccurate target populations. In some areas which had noted that they had not achieved their target despite significant efforts, RCM was utilized to confirm there were no major coverage gaps, indicating that the target used might not have been accurate; house-to-house canvassing was implemented to verify every child was reached in some areas. On the other hand, some areas had a larger than expected turnout and easily achieved their target. However, wherever the results of rapid convenience monitoring indicated coverage gaps, managerial provisions were made to increase the number of days to the SIAs to reach all eligible children. Results of the RCM conducted in 6,829 households across 9 regions (excluding Somali and Dire Dawa) are summarized in Table 11 and Figure 27.

Region	Total number of houses surveyed	9 - 47 months children				0 - 59 months children			
		Number of children 9 - 47m in the houses	% children 9-47 months that had not received measles doses	Number of children seen by the monitor	% of children without finger markings	Number of children <5yrs in the houses	% children 9-47 months that had not received polio doses	Number of children seen by the monitor	% of children without finger markings
Amhara	1,058	1,067	5.3	1,034	10.5	1,252	3.2	1,150	4.0
Oromia	1,856	2,278	4.5	2,196	9.1	2,648	5.2	2,486	9.1
SNNPR	1,084	1,111	2.6	1,100	5.1	1,182	3.6	1,094	5.1
Harari	165	191	4.2	172	-	216	4.2	206	0.5
Addis Ababa	708	716	3.2	703	11.2	749	2.5	716	9.4
B/Gumz	641	735	1.8	812	3.7	982	1.6	934	4.9
Gambella	360	460	2.0	373	24.9	562	2.7	429	23.1
Tigray	340	360	1.9	352	1.4	391	1.8	381	0.8
Afar	617	745	6.8	628	17.4	852	4.1	680	21.0
TOTAL	**6,829**	**7,663**	3.9	**7,370**	9.1	**8,834**	3.6	**8,076**	8.5

Table 11: Rapid convenience monitoring results, Ethiopia, 2010-2011

Wherever, the rapid convenience monitoring was conducted, efforts were made to identify the primary source of caretaker information regarding the SIAs. The results are indicated in Figure 30. Announcements by town criers and the local administration accounted for 61% of the indicated sources of information, while news reports and media accounted for just 10%.

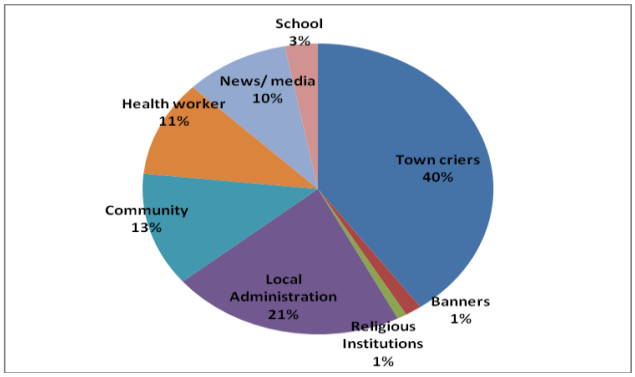


Figure 30: Source of information about the SIA from rapid convenience monitoring, Ethiopia, 2010-2011

Independent random assessments at community level by supervisors and observers also revealed that where house-to-house canvassing was done (in selected regions such as Oromia and SNNPR where community voluunteers are present), a significant number of caretakers indicated that they heard about the SIAs from the volunteers.

5.4.3 Independent Monitoring

Marking the tip of the thumb and little finger (for measles and polio vaccine recipient children respectively) using indelible ink from custom made markers was one of the tools used to identify children who have already received services. The markings are expected to remain for more than 4 weeks on the painted fingernails, and are expected to help with the monitoring activities during and post campaign. However, during phase I, it was noted that many of the finger markings actually faded within the first two days, and posed challenges for post campaign independent monitoring. This was thought to be related to the manufacturing defects or the handling of the markers. In addition, there was concern that the markers were drying out and were not being handled correctly.

To address this challenge in phase II, finger markers from a different manufacturer were used and training was intensified on appropriate handling of the markers. However, a similar problem was noted during the second phase, though to a lesser degree. It is thought that in fixed-site SIAs (like measles) the marker may remain open for long periods of time when there is a continuous flow of children resulting in the markers quickly drying out. Possible solutions include utilizing markers for shorter durations (e.g. 1 marker per session), collecting monitoring information from multiple data sources (e.g. finger marking, verbal report, screening card).

The finger marker failure also was a challenge for some monitors, as they recognized that the child was truly vaccinated (often evidenced by card), but lacked a finger mark (though the care-giver reported the finger recently being marked). Some monitors documented those children as vaccinated according to verbal report, while others reported only those with identifiable finger marks. See Figure 31.

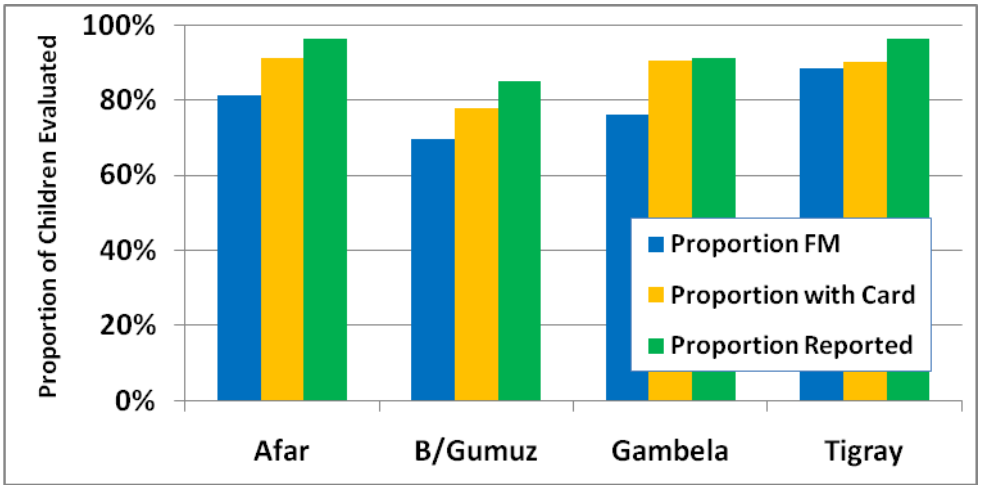


Figure 31. Difference in percent of evaluated children 9-47 months of age vaccinated for measles in four regions where data from finger marking (FM), screening card and verbal report data were collected. Note lower FM relative to card indicating FM failure.

6. Post implementation activities and coverage results

6.1 Mop up activities

During the cascaded training workshops, it was emphasized that all woredas or zones that did not achieve the 95% target for measles vaccination coverage during the SIAs would have to conduct mop up activities immediately following the SIAs. As such, efforts were made to achieve the target coverage and where not achieved, immediate action was taken. However, the documentation of mop up activities at zonal level was a challenge except in East Haraghe zone which systematically planned, implemented and documented mop up activities in all woredas following the SIA.

6.2 Reporting of coverage

6.2.1 Administrative Coverage

Administrative data was compiled and summarized at each level and fed up to the next level. A total of 9.1 million children received measles vaccine, with an average coverage of 106% at national level, ranging from 42% in Assela town (Oromiya Region) to 161% in Basketo zone (SNNPR). See Figure 32.

All in all, 85% of zones and 91% of woredas achieved at least 95% administrative measles vaccination coverage. The following zones did not achieve the 95% coverage target for measles vaccination: East Tigray, Central Tigray, South Wello, Korahe, some administrative towns: Nekemt, Asela, Bishoftu, Bahir Dar, and Lideta and Gulele sub cities of Addis Ababa.

With respect to OPV coverage during this integrated activity, a total of 13 million under-five children received OPV with a national coverage of 97%. Subnational level coverage was ranging from 46% in Bishoftu town (Oromiya region) to 123% in Basketo (SNNPR).

" Work that was done with better coordination reached more children than previous SIAs." ***Sister Rokia Ahmad- Nurse, Assaita Health Center, Afar Zone 1***

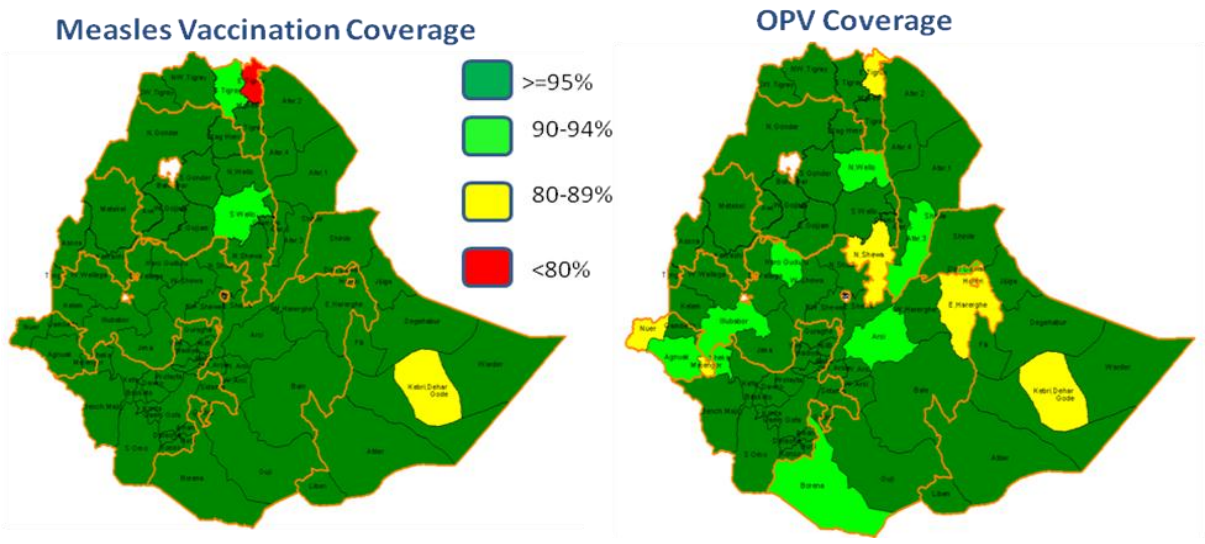


Figure 32. Shade map indicating administrative coverage at zonal level for the measles and polio components of the integrated SIAs. October 2010 and February 2011.

In addition, 7,200,992 (97%) children received vitamin A supplementation; 5,123,717 (102%) children received deworming medicine; 1,861,865 (96%) children as well as 384,035 (80%) pregnant and lactating mothers benefited from a screening of their nutritional status in selected Woredas.

6.2.2 Independent Monitoring Results

The results from the independent monitoring exercise included pieces of information like the proportion of children that have received measles and/ or OPV vaccine, reasons as to why the SIAs doses were missed (where relevant) and the source of caretaker information regarding the SIAs. The data was collected at a household level. Because of the lack of convenience sampling used in the monitoring activity, the data is treated in such a way as to determine whether or not a specific monitoring area has more than the acceptable proportion (<5% of unvaccinated children) during monitoring. Figures 33-38 indicate the data for the post-implementation monitoring activities.

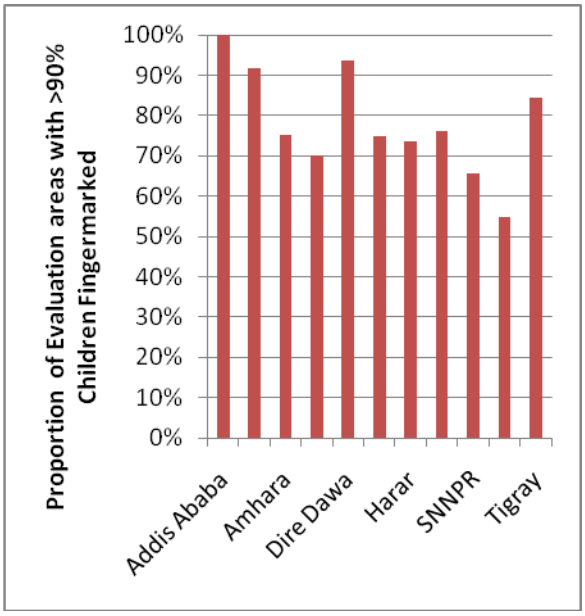


Figure 33. Proportion of evaluated areas where over 90% of children aged 9 to 47 months, who were reported finger marked for measles by independent monitors. Only inside the house post-implementation data presented.

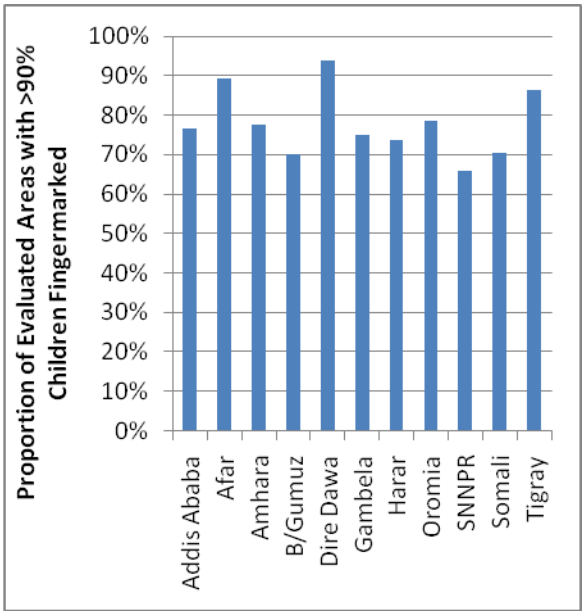


Figure 14. Proportion of evaluated areas where over 90% of children aged 0 to 59 months, who were reported finger marked for polio vaccination by independent monitors. Only inside the house data, post-implementation data presented.

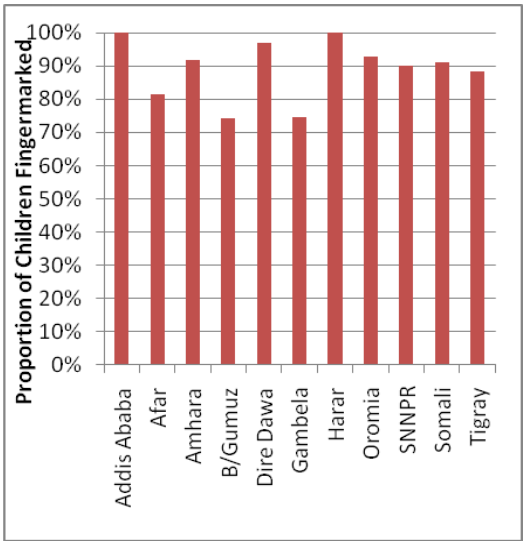


Figure 35. Proportion of children aged 9 to 47 months independent monitors reported finger marked for measles vaccination from inside the house vaccination, following SIA implementation

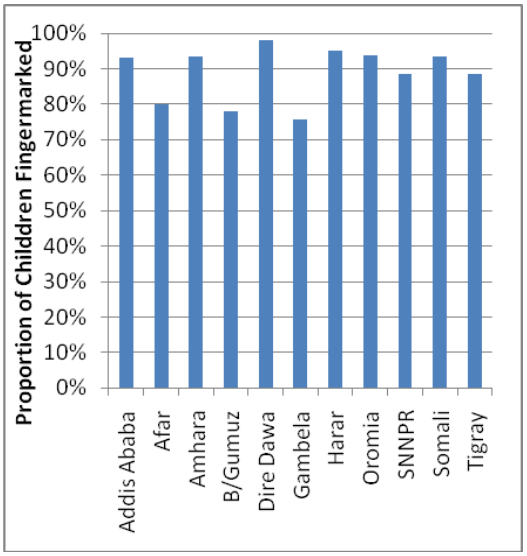


Figure 36. Proportion of children aged 0 to 59 months independent monitors reported finger marked for polio vaccination from inside the house vaccination, following SIA implementation.

Proportion of Children missed in Evaluated Woreda	Woredas Reaching Targets for Measles Vaccination	Woredas Reaching Targets for Polio Vaccination
>10%	**106** (27%)	**107** (27%)
5-10%	**67**(17%)	**79** (20%)
<5%	**222 (56%)**	**209 (53%)**

Table 12: Proportion of sampled woredas with missed children using independent monitoring

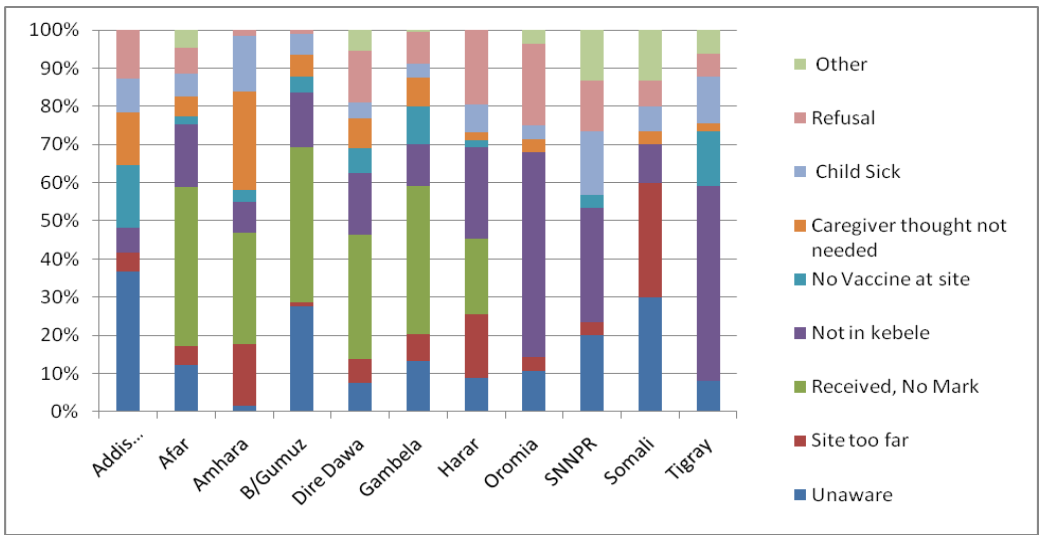


Figure 37. Proportion of care-givers reporting to independent monitors the reason why child was not marked as vaccinated or vaccinated at SIAs site. Note that in phase II, children who were not marked but vaccinated are included in "other".

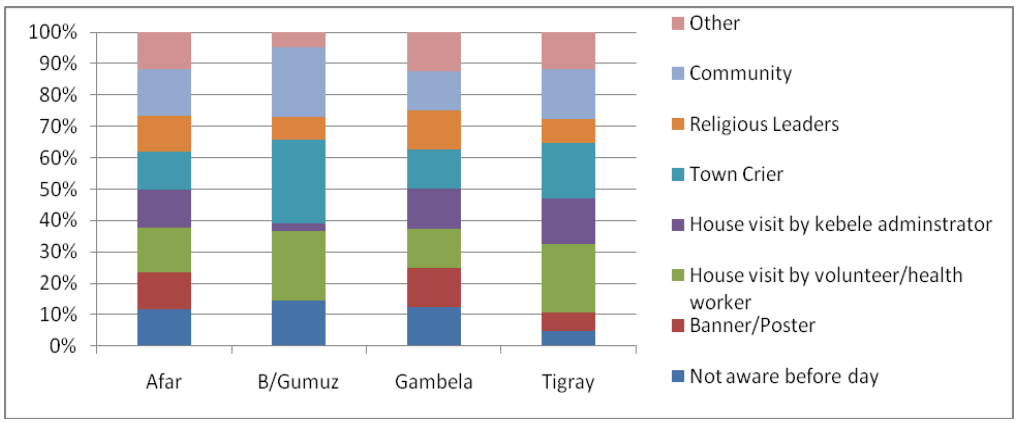


Figure 38. The source of information of the SIA was more accurately collected in Phase II. The distribution of the sources given by caregivers evaluated is presented. No single source of information predominated.

Several lessons were learnt during the monitoring activity:

- There is a need to use multiple sources of information to verify a child's vaccination status (e.g. not just finger marking)
- Improved follow-up to verify that areas noted to have inadequate coverage conduct post-SIA activities to ensure every child was reached.
- The need to develop a clear diagram on how local decision makers can interpret independent monitoring data, especially in light of the integration of different interventions.

6.3 Review meetings

Post implementation review meetings were conducted at different levels. Two national SIAs review meetings were held on 11 November 2010 and 11 March 2011, at the end of each of the two phases respectively. Participants included representatives from the RHBs, National SIA Facilitators, FMOH and partners. All regions presented their experiences in planning and implementing the SIAs, using a standard template, and thorough discussions were held. Lessons learned and recommendations for future SIAs were discussed. Similar meetings were held at regional and zonal level to share and document the experiences.

6.4 Post- SIAs Coverage Survey

6.4.1 Objectives

A coverage survey was conducted post-SIA following phase I and II in randomly selected woredas throughout the country. Sampling was done to obtain a coverage estimate for a region of +/- 10%.

The post SIA coverage survey was conducted with 3 main objectives:

1. To assess the coverage estimates of the measles among children aged 9-47 months at regional and national-level
2. To assess the coverage of other interventions including OPV, Vitamin A and de worming among children aged less than 5 months
3. To assess the routine immunization coverage among children aged 12-23 months

6.4.2 Data Collectors, Training, Data Collection

The data collection for the coverage survey targeting areas covered during the Phase I measles SIAs was conducted from November to end of December 2010.

A four-day training was given to 60 supervisors who had at least a first degree in Health or the Social Sciences. The training was conducted by a joint team from UNICEF, WHO, CSA and MEDCO. The training was basically concentrated on the study instrument, Enumeration Area map reading and GPS use. Training was completed immediately after the campaign, though data collection was delayed for administrative reasons. Data collection was piloted in Addis Ababa to will help to assess the quality of the data before involving other areas. Thereafter data collection was done in six regions (Phase I) simultaneously and completed in the second week of December. Data quality checks noted that some areas were not of the expected quality and some of the regions like Somali, part of Dire Dawa and Harari were repeated. In addition some pockets lacked data, but were traced and data were collected in these places.

The phase II data collection had two levels of training. The first training started after an intensive training of 20 supervisors and 4 regional coordinators. It included training on GPS and reading EA maps. The second level training involved each supervisor training 3 data collectors for 3 days at the woreda

level. A total of 60 data collectors were trained, 3 for each EA, who were closely supervised by one supervisor, data collectors would move sequentially from one EA to the next until all EAs were reached. Data collectors completed approximately 3.5 questionnaires per day. Phase II training at central level started the same day as the SIA implementation with data collection started one week after implementation. This has helped to do the data collection without missing the finger mark and the screening cards.

6.4.3 Sampling

The coverage survey was planned in conjunction with a best practices survey which focused on SIA planning and implementation practices at the national, regional, Woreda and health facility levels. To conduct the two surveys jointly required the coverage survey to be based on a stratified 3-stage cluster sample. Regions were defined as the strata, Woredas as the first stage cluster, enumeration areas (EAs) the second-stage cluster, and households the third stage cluster. Information on all eligible age children within selected households was collected.

The survey took place in 2 phases, 7 regions surveyed after phase I SIA implementation, and the remaining 4 after phase II implementation. Woredas were selected without replacement via simple random sampling, with the number of Woredas selected per region approximately proportional to the population of the region. 20 Woredas were selected from Oromia, 10 from SNNPR and Amhara, and 5 from the remaining 8 regions. Within each selected Woreda, 6 EAs were selected without replacement via simple random sampling, with exception of 8 Woredas in Oromia and 4 each in SNNPR and Amhara had only 3 EAs selected. Households were selected via systematic random sampling 1 with 10 children being the target expected sample size per EA. The national estimate would then be based on 80 primary sampling units (woredas), 442 secondary sampling units and approximately 4420 total children.

Region	Type	Proposed Number of Woredas for the Post-SIAs Coverage Survey	Proposed Number of EAs for the Post-SIAs coverage survey	Proposed Number of Woredas for the Best Practices Survey	Proposed Number of Kebeles for the Intra- and Post-campaign Best Practices Survey	Proposed Number of Kebeles for the Post-campaign Census of <5 Children
Phase I						
Harari	urban	5	30			
Dire Dawa	urban	5	30			
Addis Ababa	urban	5	30	2	6	4
Somali	pastoralist	5	30	2	6	4
SNNPR	agrarian	10	48	4	12	8
Amhara	agrarian	10	48	4	12	8

Oromia	agrarian	20	96	8	24	16
Phase II						
Tigray	agrarian	5	30			
Afar	pastoralist	5	30			
Gambella	pastoralist	5	30			
Benshangul Gumuz	pastoralist	5	30			
Total		**80**	**442**	**20**	**60**	**40**

Table 13: Regions targeted and proposed sampling of clusters for the post Campaign 2010/2011 Evaluation, Ethiopia

6.4.4 Analysis and Results

Preliminary analysis of the data was done by local consulting firm MEDCO, with technical oversight from CDC, UNICEF/Ethiopia, UNICEF/HQ, and WHO/Ethiopia.

The results from the post campaign multistage cluster survey indicate that the national level coverage (according to vaccination card or caretaker recall) for measles vaccination during the SIAs was 88.1% (confidence estimates 85.1%, 90.6%) and 88.6% (confidence estimates 84.8%, 91.5%) for polio. The Regional level coverage figures, according to the survey, ranged between 84.2% in Afar Region and 96.2% in Benishangul Gumuz Region for measles vaccination (Table 14).

Region	Measles Coverage % (Confidence interval) by Recall	Measles Coverage % (Confidence interval) by Card or Recall	Polio Coverage % (Confidence interval) by Recall	Polio Coverage % (Confidence interval) by Card or Recall
Tigray	42.35 [10.63,81.95]	94.58 [79.16,98.77]	51.76 [17.05,84.88]	95.80 [76.73,99.37]
Afar	66.43 [38.10,86.43]	84.29 [72.28,91.70]	62.06 [35.29,83.07]	82.86 [66.84,92.06]
Amhara	73.43 [54.12,86.61]	85.62 [72.81,92.97]	68.32 [49.58,82.53]	83.81 [66.19,93.19]
Oromia	82.43 [76.25,87.27]	87.02 [82.42,90.56]	84.84 [76.60,90.54]	89.72 [84.56,93.30]
Somali	95.32 [91.46,97.49]	94.96 [84.12,98.53]	91.40 [79.42,96.70]	93.73 [82.08,97.99]
B/Gumuz	71.18 [43.12,88.95]	96.21 [92.33,98.17]	64.46 [40.93,82.61]	96.72 [90.67,98.89]
SNNPR	83.70 [68.48,92.40]	89.35 [81.17,94.02]	81.36 [63.10,91.76]	88.13 [80.00,93.23]
Gambella	50.97 [24.61,76.81]	94.27 [78.50,98.67]	56.26 [36.66,74.09]	93.96 [84.29,97.83]
Harari	88.15 [56.77,97.67]	90.22 [84.60,93.93]	84.21 [49.57,96.66]	89.87 [69.90,97.13]
Addis Ababa	71.57 [44.6,87.74]	90.92 [87.26,93.60]	57.81 [31.76,80.14]	86.20 [76.78,92.19]
Dire Dawa	91.14 [78.52,96.66]	85.30 [79.36,89.75]	87.94 [75.96,94.39]	87.62 [73.94,94.64]
Round I	**82.48** [77.65,86.46]	**87.78** [84.48,90.45]	**81.83** [75.76,86.65]	**88.06** [83.89,91.27]
Round II	**58.46** [42.25,73.03]	**93.18** [87.44,96.40]	**57.99** [41.30,73.04]	**93.85** [87.27,97.14]
National	**82.10 [77.31,86.02]**	**88.17** [85.14,90.65]	**81.28** [75.30,86.07]	**88.56** [84.76,91.50]

Table 14. Results (including confidence estimates) of Coverage for measles and polio according to the results of the coverage survey, by Region. Ethiopia.

Vitamin A coverage was 80.6% and deworming coverage 72.8% (Table 15).

	Vitamin A Coverage by Campaign Screening Card with Maternal Recall (N=5,959)			De-worming Coverage by Campaign Screening Card with Maternal Recall (N=3,822)		
Phase/Region	**(n*/N**)**	**%**	**95% CI**	**(n*/N**)**	**%**	**95% CI**
Phase I	**2,898/4,184**	**80.25**	**[71.76,86.67]**	**1,628/2,603**	**72.56**	**[63.62,79.99]**
Oromia	1,107/1,425	78.28	[64.53,87.71]	652/911	70.72	[56.91,81.54]
SNNPR	7/636	0.58		4/388	0.59	
Amhara	477/552	83.37	[67.27,92.44]	319/386	79.55	[63.30,89.77]
Somali	371/470	81.98	[69.52,90.07]	67/221	36.36	[9.08,76.57]
Addis Ababa	290/347	83.07	[73.83,89.51]	183/222	82.64	[75.71,87.90]
Dire Dawa	339/380	88.62	[81.64,93.17]	224/254	88.3	[85.37,90.71]
Harari	307/374	82.11	[46.51,96.04]	179/221	81.31	[47.48,95.44]
Phase II	**1,265/1,775**	**90.08**	**[81.09,95.06]**	**767/1,219**	**78.87**	**[47.16,63.93]**
Tigray	1/398	0.22		0/270	0	
Afar	416/471	84.44	[67.88,93.30]	214/314	69.62	[52.97,82.31]
Ben Gumuz	416/445	96.09	[86.32,98.96]	241/297	84.49	[68.50,93.17]
Gambella	432/461	92.3	[85.61,96.03]	312/338	91.81	[79.48,97.01]
National	**4,163/5,959**	**80.62**	**[72.52,86.77]**	**2,395/3,822**	**72.81**	**[48.14,64.33]**

Table 15. Post campaign coverage survey results for Vitamin A and deworming by Region. Ethiopia.

N.B There were no EOS activities in SNNPR and Tigray Regions

6.5 Evaluation of the level of implementation of the Best Practices

6.5.1 Goal and objective

The overall goal of the evaluation was to determine which best practices were implemented and how the practice affected coverage of interventions (measles, polio vitamin A, deworming) and had an impact on routine immunization practices. This was to be accomplished by evaluating the implementation of specific practices for the SIAs in 61 Kebeles found in 20 randomly selected woredas, and exploring the relationship between a set of presumed best practices and post measles vaccination coverage of children 9-47 months of age of the SIA in those woredas.

6.5.2 Intra-SIA Evaluation

Best practice observers collected data using a designed to assess the implementation of selected best practices in the 20 selected woredas.

Twenty trained observers were deployed to observe the campaign in at least 3 vaccination sites of the 20 selected best practice woredas. The preliminary findings of the intra campaign report were presented and feedback was given to consultants.

6.5.3 Post-SIAs Evaluation

Twenty of the woredas among the sixty selected for the Post-SIA coverage survey were randomly selected to be the best practice woredas from Amhara, Oromiya, SNNPR, Somali and Addis Ababa. No woreda was selected from Dire-Dawa and Harari, as it was decided to include only one city administration (Addis Ababa). In the selected 20 best practice woredas, 40 kebeles were randomly selected and census was conducted on an average of 150 households (HHs).

In each of the BP-woredas identified catchment areas were selected, the best practice questionnaire was completed by the data collectors at each level: kebele, woreda, zone (if applicable) and region. A complete census was done in the team areas selected for evaluation of best practices. In wide kebeles a segment of the kebeles was done with a minimum of 150 households. In small Kebeles, a complete census of households with eligible children was done. All eligible children in the HH were enrolled. The data was utilized to associate coverage with best practices as well as provide a regional best practice

estimate. The analysis of the evaluation of the best practices is under finalization and has therefore not been included in this report.

"All children under-five years were registered and vaccinated with the full participation of the Women Development Army. They gave support to the campaign by identifying those children who were not vaccinated. It was team work with participation of other sectors and especially political leaders. Social mobilization activities started three months before the campaign; information was effectively transmitted to the woredas and feedback provided to the Federal Ministry of Health regularly." ***Yalem Tesfaye, Deputy Head, Tigray Regional Health Bureau***

7 Lessons Learned and Next Steps

Several lessons were learned from the 1st phase measles follow up SIAs and these were used to improve the quality of the 2nd phase SIAs. Specific challenges addressed and actions taken in the 2nd phase included:

- Desk review of micro plans and adjustment of quantification of supplies before procurement, in view of the shortages experienced in the 1st round.
- Early translation, printing and distribution of communication and training materials to the regions, at least 3 weeks prior to the SIA implementation
- Emphasis on post organization, screening and proper finger marking during the training sessions at all levels
- Early disbursement of operational funds to the regions, two-three months prior to implementation of the SIA
- Implementation of sms text messaging for daily reporting of achievements intra-campaign at each level.

In general, the implementation of the "Best practices measles SIAs" has resulted in a more uniform and high coverage being achieved across the country, a more inclusive partnership to be forged at national and subnational levels, and has taught the national immunization program some valuable lessons. Some of these are indicated below:

Coordination

- Establishment of coordination structures under the Government leadership at all levels, with a high degree of accountability, contributes to proper planning, monitoring and implementation of the SIA.
- Engagement of the political leadership and the local administration at all levels is crucial to the success of the SIAs.

Micro planning

- There is need for more accurate estimation of the conversion factors used to determine the target population for under-five children, as well as emphasis on screening mechanisms to ensure the correct target is reached.

- Before deciding on the integration of multiple interventions, it is important to conduct early and thorough discussions on the practical aspects of integration, with a review of the human resource requirements, to ensure smooth implementation of an integrated SIA
- The implementation of a bottom -up approach to the planning (starting from the Kebele level with the engagement of HEWs, local administration and local partners) ensured ownership and early engagement of all stakeholders in the preparation for the SIAs. Early identification of hard to reach populations and devising plans to reach them is an important success factor.

Training

- Special efforts made to improve the quality of training were fruitful:
    - Inclusion of Pre and post tests during training sessions
    - The inclusion of practical approaches such as role plays for post organization
    - Hands on exercises on the use of monitoring formats
    - Formal evaluations for each session to improve future training

Advocacy and Communication

- Development of communication messages based on analysis of gaps and concerns of the community is effective in mobilization for SIAs.
- Using diverse methods of advocacy and communication are effective in achieving high level of community participation and mobilization.
- Innovative mobilization approaches such as house to house canvassing were very effective, Women's Development Army (Tigray) and regional advocacy visits by the National Task Force.

Logistics Management

- Central capacity is available at PFSA for distribution of SIAs logistics to the Woreda level; the managerial flexibility in the distribution mechanisms including the provision of emergency supplies by the PFSA was an important success factor.
- Early finalization and translation of all materials should be done to ensure timely printing and distribution to the peripheral level before implementation of activities.

Monitoring and Evaluation

- Employing different monitoring mechanisms (such as rapid convenience monitoring, independent monitoring and post SIA coverage surveys) to assess performance is complementary and essential in ensuring the target population is vaccinated, especially in areas with challenges in the accuracy of the target estimates.

Strengthening the routine system through SIA

- Routine immunization strengthening should be included in all aspects of SIAs planning, implementation and review. It is important that the coordination structures set up for the measles SIAs be maintained and utilized for routine immunization strengthening.
- The SIAs provided an opportunity to identify and register target children for routine EPI in some regions (SNNPR and Tigray) and through the systematic identification of hard to reach populations to target beyond the SIAs.
- The SIAs contributed to an improvement in the knowledge and skills of health workers in the delivery of EPI services through training; in addition community knowledge and perceptions towards EPI was affected positively by the SIAs, as evidenced by the results of the post-SIAs KAP and FGD surveys.
- Several local partnerships have been created and/ or strengthened through the SIAs; these need to be maximized and sustained for routine EPI and future SIAs.
- The SIAs strengthened the capacity of PFSA in the handling and distribution of vaccine logistics.

Best practices approach

- Identification of country-specific best practices for SIAs is important early in the planning process for incorporation in the micro planning and training.
- Emphasis on the best practices approach to the SIAs raised the commitment to improve the quality at all levels and resulted in better coverage performance compared to previous SIAs in Ethiopia.
- Implementation of a best practice concept improves resource allocation to most critical areas.
- The level of achievement in implementation of the pre-identified best practices is summarized in the table:

Micro planning	Training
❖ Forecast of vaccines and injection equipment was done over 6 months prior to SIAs at national level ❖ Woreda/Sub-cities micro plans included appropriate injection waste management. ❖ Micro planning was done at Kebele level involving HEWs and key stakeholders. ❖ Micro-planning included social mapping and identification of high-risk areas.	❖ Emphasis on quality training was made through institution of Pre-/Post- tests for all trainees at all levels; sessions with a good ratio of trainer to trainee (no more than 25 trainees per trainer); use of practical approaches to training such as role play, demonstrations and exercises; using of skilled resource persons including SIA Facilitators and Supervisors for lower level training ❖ Duration of training was 2-3 days at national, regional, zonal and woreda levels in view of the multiple child survival interventions.
Advocacy and Social Mobilization	**Logistics**
• A national level plan for advocacy and communication was available at least 4 months before the SIAs • Adequate funding was allocated to advocacy and communication activities • House to house social mobilization activities were performed; utilizing community mobilizers • Communication messages were based on a clear and evidence based understanding of the KAP of the community. • Clear messaging using multi-channel communication was employed in the appropriate languages.	• Pre-SIAs assessment of cold chain and maintenance (including cold rooms and refrigerators) was done in advance of SIA using facilitators deployed to all zones • A detailed woreda-level logistics distribution plan was developed at least 2 months in advance of SIAs • Distribution of vaccines and other supplies including IEC materials to regions/zones was achieved 1 -2 months prior to the 2nd phase SIA
Monitoring and Evaluation	**Strengthening Routine EPI through SIAs**
❖ A central level team was established to oversee monitoring and evaluation of the SIA ❖ Standard formats for evaluation of the SIA were developed ❖ Independent monitors were selected and trained t 1 week prior to SIAs ❖ Regular meetings with increasing frequency towards the SIA were held at all levels, particularly at the national level. ❖ District councils participated in supervision and monitoring activities, including the daily monitoring evening meetings. ❖ Special attention was given to monitoring hard-to-reach/high-risk areas and populations ❖ Monitoring of administrative coverage intra-SIA was achieved through text messaging where possible.	❖ Special efforts were made to strengthen the routine system through various stages of the planning and implementation of the SIA, particularly in communication, training, supervision and coordination.

8 Outcome and Impact of the Integrated Measles SIAs

The long-term impact of the SIA is expected to be observed in the coming years, particularly among the age group targeted in the SIA. However, immediate outcomes of the SIAs have been observed in the measles epidemiology and routine immunization system.

8.1 Measles Epidemiology

While the overall impact of the SIAs is yet to be seen in the trends of occurrence of measles in the coming years, the surveillance system has already started documenting some epidemiological changes following the conclusion of the follow up measles SIAs across the country by the end of February 2011. Case-based surveillance data for the first seven months of 2011 indicates that measles cases continue to occur sporadically across the country, with a significant reduction in the case load compared to past years. Moreover, an age shift of confirmed cases to age groups above 5 years of age is observed, with over 70% of cases being in the age group above 5 years of age as depicted in Figure 39.

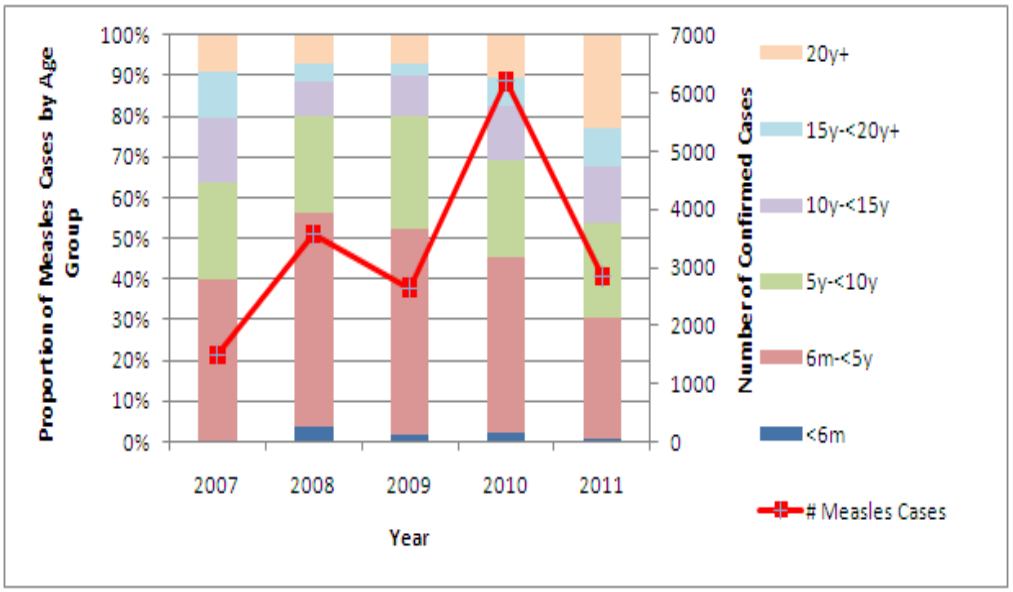


Figure 39: Age distribution of confirmed measles cases, 2007-June 2011, Ethiopia

The observed trend in measles cases following the SIA suggests that population immunity among the older age groups is still inadequate, an indication of gaps in routine EPI and quality of previous SIAs. There is therefore a need to consider wider-age group vaccination in future SIAs to effectively interrupt measles transmission in Ethiopia. Additionally, maintaining high routine coverage for the first measles dose will remain a critical component of sustained measles pre-elimination in Ethiopia.

8.2 Routine Immunisation System Strengthening

Following the conclusion of the follow up measles SIAs, there has been some evidence of routine system strengthening at national and regional level in the following aspects:

- *Coordination* – the task forces established for the SIAs have continued to perform coordination activities for new vaccine introduction (at national level) and for strengthening routine EPI activities in selected regions/ zones. In response to a confirmed circulating wild polio virus case in Benchi Maji zone of SNNPR, the Zonal measles SIA task force was re-activated to coordinate the response activities.
- *Logistics management* In view of the potential demonstrated by PFSA to deliver EPI supplies to woreda level, plans are underway to establish the same mechanism of distribution of routine EPI supplies.
- *Planning* – pre SIA registration of target children done in Tiigray and SNNPR has provided useful information for planning for routine immunization. In addition, identification of hard to reach areas during the micro planning for the SIAs and approaches implemented to reach them have been useful for sustained efforts for routine service delivery based on the SIA experience.
- *Partnerships* – several networks were established and/ strengthened at different levels through the SIA. The community level networks such as Women Development Armies and community volunteers were sensitized about measles/ EPI during the SIA and continue to be advocates for immunization.

Annex 1:

TERMS OF REFERENCE

Measles SIA Task Force- 2010

Ensuring a High Quality Campaign

Background

Ethiopia has made significant progress in mortality reduction from Measles deaths. These gains have been made through improved case-management as well as improved measles immunity through vaccination. The immunization strategy is to provide two opportunities for vaccination, one through the routine activities at 9 months, which reached 79% of under one children. The second dose is provided through scheduled preventative Supplementary Immunization Activities (SIAs). In 2010, Ethiopia is planning for a high-quality measles campaign to further increase the population's immunity from measles. This campaign will provide the second opportunity for children between 9 and 47 months of age.

The necessity of a high-quality campaign is demonstrated by the frequent number of measles outbreaks that occur each year. The investigations of these outbreaks often show the majority of the children were not vaccinated, and their illness could have been prevented.

In order to adequately prepare and coordinate the campaign, a task force for the measles SIA will be necessary to provide oversight of activities and leadership for the campaign. This task force is especially important as the SIA is being used as a 'Best Practices' measles activity, meaning that the SIA should demonstrate and identify those practices which provides the highest coverage within given resource constraints.

Context

The task force is an arm of the Interagency Coordinating Committee (ICC). The Task Force is comprised of partners who will oversee the implementation of the activity, on behalf of the Ministry of Health. The Task Force will operate at the national level, but it is expected that each Region will set-up its own coordination committee to oversee the campaigns in their respective geographic areas.

Membership

The task force is to comprise of a single representative from the following partners:

- The Federal Ministry of Health (FMoH)
- World Health Organization (WHO)
- United Nations Children's Fund (UNICEF)
- United States Agency for International Development (USAID)
- Core Group

In addition to the above members, the chairperson of the committee is the Director-General of Health Promotion and Disease Prevention from the FMoH.

Scope of Work

The overarching responsibility of the Task Force is to provide technical oversight for the Measles SIA's implementation. The task force will oversee these activities according the plan of action. The plan of action has been defined but must be updated by the Task Force, in terms of the current situation and the recommendations from the Best Practices Meeting.

Specifically, the task force will undertake the following activities:

1. Identification of the best practices and activities that are to be implemented during the SIA out of the lists produced during the MBP workshop;
2. Revise & finalize the existing plan of action by incorporating the best practices identified during the workshop;
3. Update the Measles SIA Field Guide accordingly;
4. Coordinate micro planning and training activities from the central level in a timely fashion and verify all levels are completing these activities on time.
5. Review the detail POA of the logistics requirements & distribution plan prepared by the logistic subcommittee to ensure an adequately and timely distribution of supplies to the regions;
6. Assist ICC in fundraising activities and monitor the timely disbursement of funds for the regions;
7. Liaise with responsible parties to address gaps in the preparations and implementation of the campaign.
8. Brief ICC and other stakeholders on progress of activities;
9. Regular communications with the RHBs to ensure implementation of activities
10. Planning and implementation must occur on a timely basis to ensure the activity occurs at the appropriate time.
11. The Task Force will oversee the above activities, and report to the FMoH and ICC any significant delays for their action.

Sub-Committees

In order to accomplish its activities, three sub-committees will be established. These sub-groups report to Task-Force every two-weeks and then weekly 4 weeks prior and 1 week after the campaign. They can report in writing or in person. The sub-groups have the same responsibilities as listed for the Task Force except limited to their area of work. The Task Force can decide if additional sub-committees need to be established or existing task forces be combined, to ensure their work is carried out adequately. The sub-committee forces and proposed membership is defined below. Organizations will identify their own individual representative.

Logistics	Social Mobilization	Planning/Training, Monitoring/Evaluation
FMoH-PFSA (Chair)	FMoH- Public Relations Directorate (Chair)	FMoH- HPDP (Chair)
FMoH-HPDP	Core Group	FMoH-Planning- M&E
UNICEF	Red Cross	UNICEF
WHO	UNICEF	USAID
	WHO	WHO

Deliverables

- Task Force
    - Identification of Best Practices to be implemented during the campaign (due May 10, 2010)
    - Updated Plan of Action by May 10, 2010
    - Monthly updates to ICC members

- Sub-Committees
    - Regular reports to Task Force- every two weeks until four weeks prior to campaign then weekly until 2 weeks after the campaign
    - Regional Task Forces should receive a copy of the report on a regular basis
    - Development of Plan of Action for area of responsibility (May 8, 2010)

National Integrated Measles SIA Administrative Report, Ethiopia, October 2010 & February 2011							
		Measles			Polio		
Region	Zone	Target	Vaccinated	%	Target	Vaccinated	%
Oromia	Horogudru	67,977	70,132	103	116,433	108,602	93
	Bale	165,703	189,703	114	261,301	279,303	107
	Guji	168,213	195,908	116	288,363	275,554	96
	Illubabor	152,231	154,222	101	260,968	239,950	92
	East Hararge	508,315	507,249	100	794,242	673,352	85
	Jimma	294,970	311,750	106	501,910	488,132	97
	Jimma Town	13,715	12,724	93	20,212	18,923	94
	West Arsi	228,463	271,961	119	391,650	395,100	101
	Kellem Wollega	103,894	99,331	96	162,094	160,142	99
	West Hararge	220,933	232,312	105	378,743	360,040	95
	South West Shoa	110,211	114,530	104	188,930	182,633	97
	East Wollega	135,569	149,777	110	232,404	223,123	96
	East Shoa	139,859	152,626	109	239,758	229,558	96
	North Soha	130,203	138,922	107	218,784	218,169	100
	West Shoa	230,665	243,602	106	377,851	371,944	98
	West Wellega	159,229	160,834	101	272,964	260,722	96
	Finfne Zurea	88,276	86,612	98	145,617	133,231	91
	Nekemt Town	9,656	7,700	80	16,553	11,612	70
	Borena	136,306	146,620	108	199,453	185,306	93
	Arsi	302,118	329,307	109	517,916	488,913	94
	Asela town	8,452	3,541	42	14,491	6,144	42
	Shashmene Town	14,252	15,132	106	27,959	20,276	73
	Adama Town	27,909	18,530	66	47,843	29,881	62
	Bishoftu Town	13,918	6,266	45	21,200	9,810	46
	OROMIYA (Total)	**3,431,037**	**3,619,291**	**105**	**5,697,639**	**5,370,420**	**94**
Amhara	South Gondar	214,052	229,732	107	296,076	311,354	105
	East Gojjam	224,207	339,732	152	311,961	343,752	110
	South Wollo	279,701	262,843	94	386,881	378,704	98
	North Shoa	193,308	185,518	96	303,345	270,785	89
	North Gondar	331,968	329,878	99	479,676	467,867	98
	West Gojjam	220,604	225,143	102	305,138	333,691	109
	Awi	103,391	104,451	101	143,009	144,732	101
	Bahir Dar Town	24,520	18,494	75	39,688	26,156	66
	North Wollo	145,983	157,352	108	219,953	206,224	94
	Oromia	48,334	50,833	105	78,231	82,832	106
	Waghimra	46,738	49,937	107	74,504	74,666	100
	AMHARA (Total)	**1,832,806**	**1,953,913**	**107**	**2,638,462**	**2,640,763**	**100**
SNNPR	Bench Maji	76,376	89,212	117	119,601	124,069	104
	Gamo Gofa	173,520	196,284	113	280,854	281,854	100
	Dawro	54,561	57,293	105	86,609	89,341	103
	Wolaita	167,699	175,555	105	267,229	265,586	99
	Konta Sp.Woreda	10,254	10,433	102	16,399	15,585	95
	Hadiya	141,545	172,121	122	231,333	238,761	103
	Silte	63,192	74,206	117	137,983	145,974	106
	Gurage	150,369	152,372	101	22,916	22,801	99
	Yem sp.woreda	9,075	10,121	112	14,276	15,096	106
	Konsso Sp.woreda	25,509	32,929	129	41,014	47,079	115
	Derashe sp.woreda	15,517	18,484	119	25,114	25,176	100
	Amaro sp.woreda	21,827	22,204	102	30,739	30,598	100
	Burjie Sp.woreda	6,285	8,725	139	9,990	11,554	116
	Sheka	28,221	27,823	99	34,875	32,698	94
	Kembata	77,374	85,089	110	123,693	129,991	105
	South Omo	62,087	80,807	130	101,787	109,718	108
	Gedo	97,929	109,969	112	154,930	167,893	108
	Sidama	339,244	383,970	113	518,231	547,597	106
	Hwassa	28,429	28,259	99	45,442	32,928	72
	Keffa	99,620	100,082	100	156,842	154,486	98
	Basketo	6,539	10,542	161	10,096	12,426	123
	Alaba special woreda	25,306	30,036	119	40,959	42,155	103
	SNNPR (Total)	**1,680,478**	**1,876,516**	**112**	**2,470,912**	**2,543,366**	**103**
Addis Ababa	Addis Ketema	13,079	11,986	92	20032	15183	76
	Akaki Kaliti	9,291	10,443	112	14230	14586	103
	Arada	10,870	10,831	100	16649	15365	92
	Bole	15,829	19,248	122	24243	26879	111
	Gulele	13,709	12,138	89	20997	14339	68
	Kirkos	11,331	9,702	86	17354	13512	78
	Kolfe Keranio	21,978	31,960	145	33662	44678	133
	Lideta	10,337	7,338	71	15833	10769	68
	Nefas Selk Lafto	16,208	20,563	127	24824	27952	113
	Yeka	17,765	21,778	123	27209	27800	102
	Addis Ababa (Total)	**140,397**	**155,987**	**111**	**215,033**	**211,063**	**98**
Harari	**Harari**	**20,552**	**21,876**	**106**	**30,474**	**27,059**	**89**
Dire Dawa	**Dire Dawa**	**30,211**	**29,595**	**98**	**45,939**	**42,040**	**92**
Somali	Jijiga	116,559	120,330	103	179,834	116,559	65
	Shinile	53,108	56,667	107	81,938	81,366	99
	Korahe	36,325	30,170	83	56,045	49,570	88
	Fik	40,464	39,065	97	62,430	60,282	97
	Warder	35,556	34,825	98	54,858	54,451	99
	Degahabur	55,590	53,667	97	85,767	83,152	97
	Afder	66,360	64,565	97	102,384	101,094	99
	Gode	54,204	52,994	98	83,630	81,418	97
	Liben	62,720	62,073	99	180,398	175,351	97
	Somali (Total)	**520,886**	**514,356**	**99**	**887,284**	**803,243**	**91**
Tigray	Southern	66,100	63,333	96	99,880	97,428	98
	Eastern	80,998	62,233	77	121,169	100,734	83
	South eastern	54,352	55,487	102	81,312	87,557	108
	Central	124,179	116,206	94	185,758	188,668	102
	North western	80,339	88,577	110	120,181	139,693	116
	Western	38,277	42,371	111	57,259	64,709	113
	Mekele	24,520	16,128	66	36,906	24,613	67
	Tigray (Total)	**468,765**	**444,335**	**95**	**702,465**	**703,402**	**100**
Afar	Zone 1	50,128	47,931	96	75,447	71,688	95
	Zone 2	50,823	48,863	96	81,715	78,245	96
	Zone 3	23,457	22,960	98	34,884	32,925	94
	Zone 4	26,520	25,894	98	38,808	37,208	96
	Zone 5	40,911	38,777	95	60,386	57,539	95
	Afar (Total)	**191,839**	**184,425**	**96**	**291,240**	**277,605**	**95**
Ben-Gumuz	Assosa	31,969	36,456	114	50,754	52,010	102
	Metkel	29,153	37,268	128	48,389	53,871	111
	Kamashe	11,102	12,412	112	18,428	19,227	104
	Mao-komo	4,962	5,661	114	8,236	8,191	99
	Ben-Gumuz (Total)	**77,186**	**91,797**	**119**	**125,807**	**133,299**	**106**
Gambella	Agnuak	7,690	7,846	102	12,371	11,674	94
	Mejenger	6,626	6,319	95	10,658	9,054	85
	Nuer	12,900	13,078	101	20,751	18,378	89
	Gambella Sp.Woreda	9,652	9,621	100	15,527	15,303	99
	Gambella (Total)	**36,868**	**36,864**	**100**	**59,307**	**54,409**	**92**
	National	**8,431,025**	**8,928,955**	**106**	**13,164,562**	**12,806,669**	**97**

National Integrated Measles SIA - Vitamin A, De-worming and Nutritional Screening Coverage Report, Ethiopia, October 2010 & February 2011

Region	Zone	Vitamin A			Deworming			Nutritional Screening (children)			Screening pregnant & lactating mothers		
		Target	Achievement	%	Target	Achievement	%	Target	Achievement	%	Target	Achievement	%
Oromia	Horogudru	104,967	93,630	89	70,480	73,783	105						
	Bale	238,995	259,335	109	170,802	178,135	104	45,316	52,839	117	11,480	21,819	190
	Guji	256,324	271,695	106	171,737	183,091	107	95,541	96,998	102	20,266	23,419	116
	Illubabor	239,221	222,068	93	158,031	164,503	104						
	East Hararge												
	Jimma	441,076	412,356	93	303,935	308,008	101						
	Jimma Town	17,325	15,515	90	12,994	11,650	90						
	West Arsi	359,123	372,505	104	237,239	253,265	107	173,976	179,310	103	36,904	27,140	74
	Kellem Wollega	148,585	136,807	92	98,156	104,080	106						
	West Hararge	346,697	340,999	98	229,347	232,855	102	156,375	151,379	97	27,528	30,201	110
	South West Shoa	173,187	169,149	98	114,409	120,727	106	31,838	31,757	100	7,332	5,566	76
	East Wollega	213,035	205,929	97	140,734	149,912	107						
	East Shoa	219,778	192,101	87	145,187	123,520	85	80,000	44,366	55	18,424	10,497	57
	North Soha	200,108	203,192	102	142,743	146,835	103						
	West Shoa	362,473	349,249	96	239,452	247,705	103	118,605	111,447	94	25,159	14,427	57
	West Wellega	250,217	239,233	96	165,295	167,253	101						
	Finfne Zurea	135,325	110,749	82	89,390	87,656	98	38,847	28,218	73	8,477	3,037	36
	Nekemt Town	15,174	10,227	67	10,024	7,612	76						
	Borena	203,242	193,026	95	134,263	132,659	99	148,203	128,484	86.7	33,805	36,328	107.463393
	Arsi	474,757	479,505	101	313,627	344,990	110						
	Asela town	13,283	5,340	40	8,775		0						
	Shashmene Town	22,598	19,174	85	14,929	13,319	89						
	Adama Town	43,856	26,639	61	28,972	19,754	68						
	Bishoftu Town	19,774	9,395	48	13,063	6,192	47						
	OROMIYA (Total)	**4,499,119**	**4,337,818**	**96**	**3,013,583**	**3,077,504**	**102**	**888,700**	**824,798**	**93**	**189,375**	**172,434**	**91**
Amhara	South Gondar	282,479	305,329	108	186,418	221,286	119	186,744	200,960	108	53,645	34,728	65
	East Gojjam												
	South Wollo	369,113	316,302	86	275,115	271,048	99	286,172	271,342	95	81,226	66,049	81
	North Shoa	274,044	256,173	93	188,200	195,103	104	51,708	50,785	98	10,820	3,095	29
	North Gondar	415,969	415,278	100	295,800	310,344	105	247,465	261,269	106	76,482	50,654	66
	West Gojjam												
	Awi												
	Bahir Dar Town												
	North Wollo	208,379	197,960	95	143,588	138,582	97	67,575	52,073	77	18,406	8,849	48
	Oromia												
	Waghimra												
	AMHARA (Total)	**1,549,983**	**1,491,042**	**96**	**1,089,122**	**1,136,363**	**104**	**839,663**	**836,429**	**100**	**240,579**	**163,375**	**68**
	SNNPR	**NO EOS IN SNNPR**											
	SNNPR (Total)												
Addis Ababa	Addis Ketema	18087	13647	75	12,308	9,829	80	**NO NUTRITIONAL SCREENING IN ADDIS ABABA**					
	Akaki Kaliti	12849	13786	107	8,743	9,027	103						
	Arada	15032	14358	96	10,229	8,531	83						
	Bole	21889	24888	114	14,859	16,212	109						
	Gulele	18959	15656	83	12,901	10,332	80						
	Kirkos	15794	12398	78	10,663	7,191	67						
	Kolfe Keranio	30394	40217	132	20,682	26,201	127						
	Lideta	14259	10388	73	9,278	6,197	67						
	Nefas Selk Lafto	22414	25206	112	15,252	16,121	106						
	Yeka	24567	24721	101	16,717	16,791	100						
	Addis Ababa	**194,244**	**195,265**	**101**	**131,632**	**126,432**	**96**						
Harari	Harari	28,590	24,244	85	19,238	17,565	91	15144	13108	87			
Dire Dawa	Dire Dawa	42,522	36,534	86	30,373	29,075	96						
Somali	Jijiga	155,250	151,899	98	102,786	97,454	95	**NO NUTRITIONAL SCREENING IN SOMALI**					
	Shinile	73,339	73,195	100	48,556	49,265	101						
	Korahe	50,164	42,928	86	33,212	27,645	83						
	Fik	55,879	53,296	95	36,996	34,257	93						
	Warder	49,101	47,665	97	32,508	30,866	95						
	Degahabur	76,767	75,503	98	50,825	49,572	98						
	Afder	91,640	90,478	99	60,672	59,447	98						
	Gode	74,854	72,432	97	49,720	47,390	95						
	Liben	86,613	83,184	96	57,344	54,032	94						
	Somali (Total)	**713,607**	**690,580**	**97**	**472,619**	**449,928**	**95**						
Tigray		**NO EOS IN TIGRAY**											
	Tigray (Total)												
Afar	**Zone 1**	68,823	68,163	99	45,711	43,338	95	68,821	67,600	98.2	19,515	18,273	94
	Zone 2	69,777	70,423	101	46,345	47,555	103	69,778	69,506	99.6	18,226	17,119	94
	Zone 3	32,205	31,030	96	21,390	19,550	91						
	Zone 4	36,411	33,613	92	24,183	24,659	102	**NO NUTRITIONAL SCREENING**					
	Zone 5	56,168	56,294	100	37,306	38,043	102						
	Afar (Total)	**263,384**	**259,523**	**99**	**174,935**	**173,145**	**99**	**138,599**	**137,106**	**99**	**37,741**	**35,392**	**93.77599958**
Ben-Gumuz	**Assosa**	45,863	46,439	101	30,492	31,769	104	**NO NUTRITIONAL SCREENING**					
	Metkel	45,700	46,592	102	28,974	31,885	110						
	Kamashe	15,638	15,669	100	11,381	11,381	100						
	Mao-komo	7,118	7,269	102	4,881	4,881	100						
	Ben-Gumuz (Total)	**114,319**	**115,969**	**101**	**75,728**	**79,916**	**106**						
Gambella	**Agnuak**	11,032	10,597	96	7,344	7,136	97	11,032	10,583	96	3178	3010	**95**
	Mejenger	9,503	8,012	84	6,327	5,890	93	9,503	8,028	84	2,158	1,969	**91**
	Nuer	18,505	17,820	96	12,319	11,428	93	18,505	18,314	99	4,297	4,654	**108**
	Gambella Sp.Woreda	13,845	13,588	98	9,217	9,335	101	13,845	13,499	98	3,935	3,201	**81**
	Gambella (Total)	**52,885**	**50,017**	**95**	**35,207**	**33,789**	**96**	**52,885**	**50,424**	**95**	**13,568**	**12,834**	**95**
	National	**7,458,654**	**7,200,992**	**97**	**5,042,436**	**5,123,717**	**102**	**1,934,992**	**1,861,865**	**96**	**481,263**	**384,035**	**80**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