World Health Organization

ETHIOPIA COUNTRY OFFICE

ANNUAL REPORT | 2014

Expanded Programme on Immunization

ETHIOPIA

EXPANDED PROGRAMME ON IMMUNIZATION
ETHIOPIA

ANNUAL REPORT
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Table of Contents

Acronyms

AFP	Acute Flaccid Paralysis
CDC	Centers for Disease Control and Prevention
EPHI	Emergency Public Health Institute
EPI	Expanded Program on Immunization
FMoH	Federal Ministry of Health
HC	Health Center
HEW	Health Extension Worker
Hib	*Haemophilus influenzae* type b
HMIS	Health Management Information System
ICC	Interagency Coordinating Committee
IDSR	Integrated Disease Surveillance and Response
IIP	Immunization In Practice
IHR	International Health Regulations
IM	Independent Monitoring
IST	Inter-country Support Team
MNTE	Maternal and Neonatal Tetanus Elimination
NNT	Neonatal Tetanus
NP-AFP	Non-polio Acute Flaccid Paralysis
NPEV	Non-polio enterovirus
OPV	Oral Polio Vaccine
PBM	Pediatric Bacterial Meningitis
PDA	Personal Digital Assistant
PFSA	Pharmaceutical Fund and Supply Agency
PHEM	Public Health Emergency Management
SIA	Supplemental Immunization Activity
SMT	Stock Management Tool
SNNPR	Southern Nations Nationalities Peoples Region
SSA	Special Services Agreement
STOP	Stop Transmission of Polio
TT	Tetanus Toxoid
VPD	Vaccine Preventable Disease
cVDPV	Circulating Vaccine Derived Polio Virus
UNDSS	United Nations Department of Safety and Security
UNICEF	United Nations Children's Fund
WCO	World Health Organization Country Office
WFP	World Food Programme
WPV	Wild Polio Virus

Foreword

Dr Pierre M'PELE-KILEBOU

WHO Representative for ETHIOPIA

Reflecting back on 2014, I would like to acknowledge the prioritization of the immunization programme by the Government of Ethiopia. The high level monitoring of the program through the Ministerial Delivery Unit and National Command Post structures of the Federal Ministry of Health, and the designation of an EPI Team following the restructuring process demonstrated the strong commitment to address the challenges in the program.

Working together with the Government at all levels and partners, several achievements were registered in 2014. Significant effort was made to interrupt wild polio virus transmission in Somali Region following the confirmation of an outbreak in the Horn of Africa in May 2013. There have not been any cases of WPV in Ethiopia since 5 January 2014, but the risks prevail. We must remain vigilant in the fight to end polio. Progress was made in moving forward with implementation of a national routine immunization improvement plan with a focus at zonal and woreda level. Improvement in vaccination coverage and more zones achieving at least 80% coverage is noted.

The excellent collaboration between the WHO Country Office and the Federal Ministry of Health and its specialized agencies, Regional Health Bureaus, professional associations, the UN Delivering as One and the health development partners, has created the enabling environment for WHO to perform its' mandate. I would like to acknowledge the partnerships with UNOPs, WFP and UNDSS in 2014 to address the operational complexities in the response to the polio emergency.

Let me take this opportunity to express our sincere gratitude to our donors for the financial support that enabled WHO to support the immunization program at country level. The achievements are our joint successes. We rely on your continued support as we strive to further strengthen the health system in Ethiopia to sustain the achievements in polio eradication and accelerated disease control.

I convey our appreciation to the team at WHO HQ, AFRO and IST for their support, good collaboration and team spirit in facilitating our work in 2014.

Above all, I thank my team at country level, particularly those in the front line at woreda, zonal and regional level for their hard work and resilience in our efforts to protect Ethiopian children from vaccine preventable diseases for a bright future.

Dr Pierre M'pele-Kilebou
WHO Representative

WHO Ethiopia's support to the FMOH aligned with the Government and AFRO priorities focusing on polio eradication, reducing the number of under vaccinated children, accelerated disease control and improving data quality. Great appreciation goes to the WHO staff directly seconded to the FMOH and regional level, in addition to the central team, who continue to provide the required technical and administrative support to achieve the annual set objectives.

Progress of the EPI work plan was monitored through weekly central staff meetings. In addition, a weekly road map for implementation of the annual plan was developed, shared with IST and AFRO and monitored through weekly teleconferences with IST/AFRO/HQ and global partners. Bimonthly review meetings were held locally at the regional level. Additionally, quarterly review meetings were conducted centrally involving the Government at Federal and Regional levels and partners, during which, immunization and surveillance performance were reviewed, alignment of partner support discussed and recommendations made.

A surge in operations in 2013 and 2014 necessitated recruitment of several consultants to provide support to respond to the polio outbreak in Somali Region. Coordination of the large EPI workforce (of 112 Technical Officers in 2014) was therefore important. The accountability framework to monitor staff and non-staff performance based on key deliverables further strengthened in 2014. A monitoring dash board was devised and quarterly feedback instituted on implementation of expected deliverables.

Building on the achievements in 2014, emphasis moving forward will be placed on maintaining polio-free status, polio legacy planning, continued implementation and monitoring of the routine EPI improvement plan, introduction of new vaccines and measles elimination strategy implementation.

Dr Fiona Braka
Maternal and Child Health Cluster Coordinator
WHO Country Office, Ethiopia

Executive Summary

The WHO Ethiopia Country Office EPI support to the Federal Ministry of Health in 2014 focused on four key priorities: interrupting and sustaining polio eradication status, routine immunization strengthening, accelerated disease control and improving data quality.

Significant support was provided for interruption of a wild polio virus outbreak in Somali Region of Ethiopia that began in August 2013, following an outbreak in neighboring Somalia. One case was confirmed in 2014 (compared to 9 cases in 2013) in Warder District, Dollo Zone of Somali Region, with date of onset of paralysis on 5 January 2014. Seven polio supplemental immunization activities (SIAs) were conducted including one nationwide campaign. Emphasis was placed on strengthening the quality of the SIAs. Lot quality assurance surveys (LQAs) were piloted and implemented in selected zones of Somali Region. WHO supported the Somali Regional Health Bureau (RHB) to establish a command post in Dollo zone to strengthen coordination of the response. WHO opened an operations base in Dollo Zone, and deployed staff to the zone to work closely with Zonal authorities. Three external polio outbreak assessments conducted in January, June and November 2014, confirmed significant progress in the outbreak response.

AFP surveillance was strengthened through increase in human resources in high risk areas, especially Somali Region, to facilitate active case search, capacity building and supportive supervision; close monitoring of indicators and staff deliverables and regular feedback is provided as part of the EPI accountability framework. Community based surveillance was initiated in select zones of Somali Region. The proportion of zones achieving the key surveillance performance indicators increased from 60% to 71% between 2013 and 2014.

Implementation of the national routine immunization improvement plan 2014-2015, was accelerated in 2014. 51 poor-medium performing zones were identified and Technical Assistants (TAs) deployed to support the respective Zonal Health Departments; WCO deployed 25 of the TAs (10 under a CDC START project). Immunization in Practice modules were updated and training facilitated at zonal level. Several advocacy activities were implemented including commemoration of the 4th African Vaccination Week and World Polio Day. Review meetings to monitor progress of the improvement plan were facilitated at national level and in selected zones. Cold chain expansion was facilitated at all levels and support provided for the PFSA transition plan implementation. Available data indicates improvement in coverage (at 82% completeness of reporting) with an increase in the proportion of zones achieving at least 80% coverage from 29% in 2013 to 48% in 2014. The WHO-UNICEF Joint coverage estimates for 2013 were reviewed and finalized, indicating improvement in coverage from 61% in 2012 to 72% in 2013.

Several measles outbreaks were experienced in 2014; a total of 302 outbreaks with 292 woredas (36%) affected. 67% of measles cases were above 5 years of age. Support was

provided for investigation and local response to the outbreaks, including an external assessment of the recurrent measles outbreaks in SNNPR. A plan and proposal were developed for a national measles campaign in 2015 and submitted to GAVI.

WCO continued to compile and submit weekly, monthly and quarterly surveillance and routine reports. Progress was made in instituting monthly reporting by woreda level, although timeliness and analysis of information remains a challenge. WHO Field Officers supported capacity building in data management at zonal level and implementation of data quality self-assessments. Data harmonization activities for routine as well as laboratory data were done.

The key challenges centred around several competing activities including the response to the polio outbreak, complexities in the polio outbreak region affecting operations, inadequate community sensitization on AFP surveillance impacting on timeliness of detection of cases in parts of Somali Region, high staff turnover at all levels, persistent low routine EPI coverage in pastoralist regions, and sub optimal timeliness in reporting of routine EPI data.

The total funding available for program activities in 2014 was USD 38,975,971, provided through contributions from numerous donors. 78% of the funding was for the polio outbreak response activities.

1. Achievements

1.1 Polio Eradication

1.1.1 Polio Outbreak Response

In response to the WPV outbreak that was confirmed in August 2013 in Somali Region of Ethiopia, linked to the outbreak in neighboring Somalia, the Government of Ethiopia and partners continued to work persistently in the response through implementation of SIAs, strengthening of AFP surveillance and routine EPI, with a focus in Somali Region.

Coordination mechanisms (command posts) remained in place in 2014 at the national and regional levels led by H.E The State Minister of Health and the Vice President of Somali Region respectively. WHO supported the Somali Regional Health Bureau (RHB) to establish a command post in Dollo zone to strengthen coordination of the response. WHO opened an operations base in Dollo Zone, in collaboration with UNICEF, and deployed staff to the zone to work closely with Zonal authorities.

Official opening of the Dollo zone command post by HE The Vice President of Somali Region (R), HE The State Minister of Health (C), and the WHO Representative (L), Warder, Dollo Zone, Somali Region, June 2014

Seven polio SIAs were conducted including one nationwide campaign. Emphasis was placed on strengthening the quality of the SIAs. A comprehensive micro planning tool was adapted and instituted in a bottom up approach with validation in high risk areas and review between rounds. To increase campaign coverage, particularly in pastoralist populations, clan and religious leaders were engaged in the micro-planning process in Somali Region. Furthermore, micro planning by settlements was done in Dollo zone; over 1,300 additional settlements were identified. Significant increase in vaccination teams was done to reach the additional settlements. Illustrative materials for vaccinators highlighting key quality aspects (such as mapping) were developed and translated for use in Somali Region.

Vaccination team movement map, Somali Region, 2014

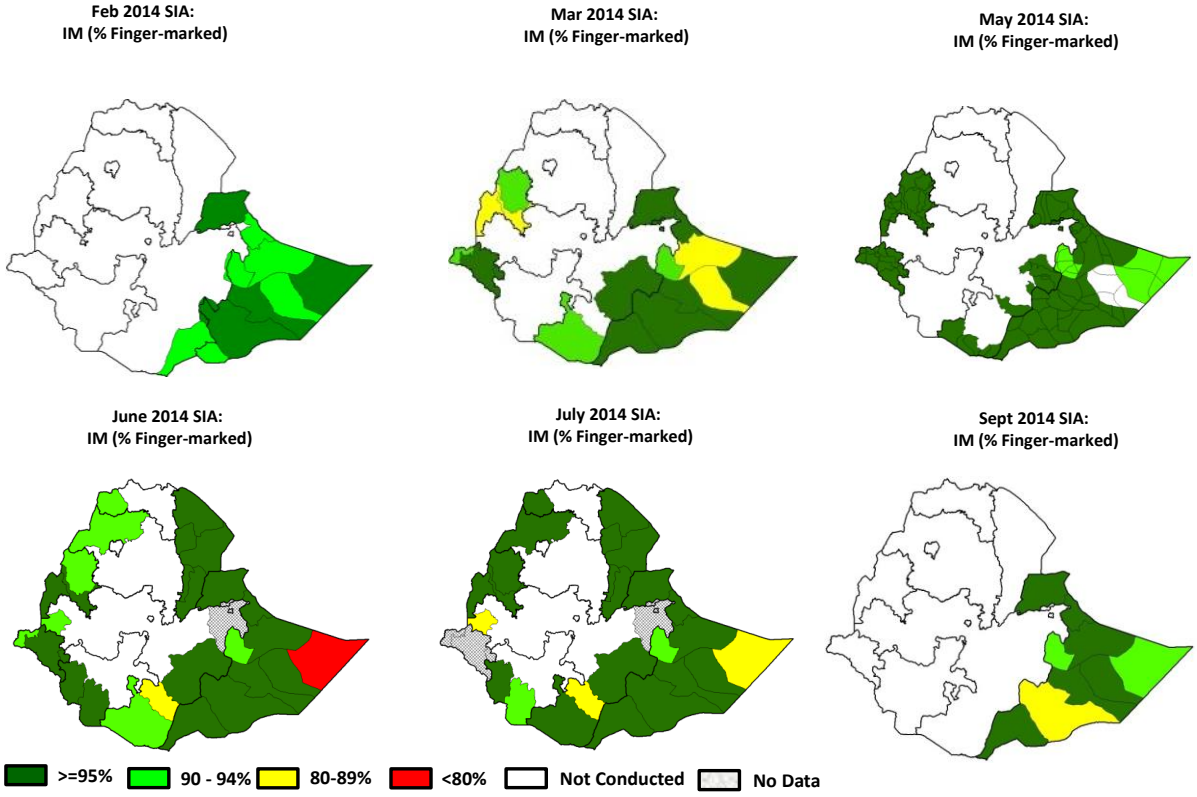
Innovative approaches for reaching special groups and areas were implemented in Somali region (SIADs, mobile teams, engagement of armed forces, intensified cross border vaccination, livestock broker engagement and water point strategy).

Special strategies to reach hard to reach and pastoralist populations in Somali: Mobile teams (L), use of armed forces in insecure areas (C), and engagement of livestock brokers (R)

Strengthening of monitoring and supervision was done through development and implementation of a monitoring dash board in Somali to determine level of preparedness for SIAs, deployment of more supervisors in hard to reach areas and refining of tools to expand on reasons for absent children.

Lot quality assurance surveys (LQAs) were piloted and implemented in selected zones of Somali Region to further strengthen the monitoring for quality SIAs.. The scale up is ongoing in Somali region: during the 12th round, two zones implemented LQAs done by an independent group of surveyors in Jijjiga and Dollo zones; implementation is ongoing following the 13th round (February 2015) in 3 zones: Jijjiga, Dollo and Nogob. Direct supervision of the LQAs is being done by WHO in collaboration with Jijjiga University. The results of the LQAs for the 12th round indicate out of the 13 lots/woredas selected, 7 out of 8 lots in Jijjiga zone were rejected while all 5 lots from Dollo Zone passed. Mop up activities were conducted in the lots that failed in Jijjiga and very close attention given during the micro planning and supervision in the 13th round to address the gaps.

Figure 1: Polio SIA Coverage, Rounds 6-12, 2014, Ethiopia



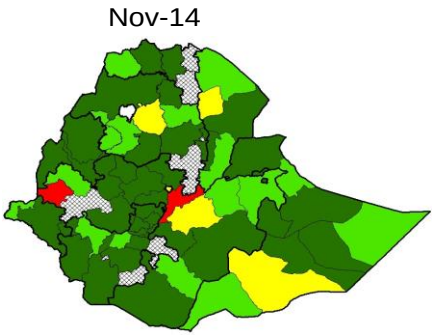
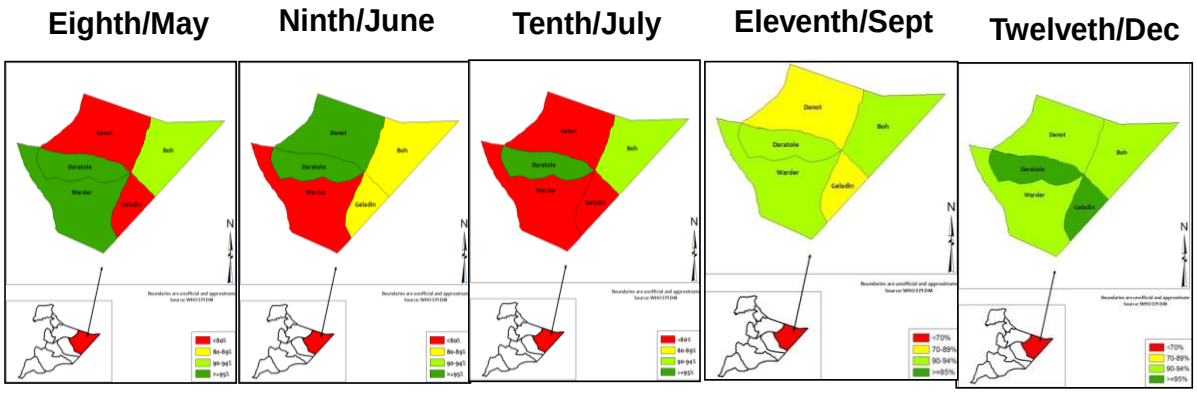


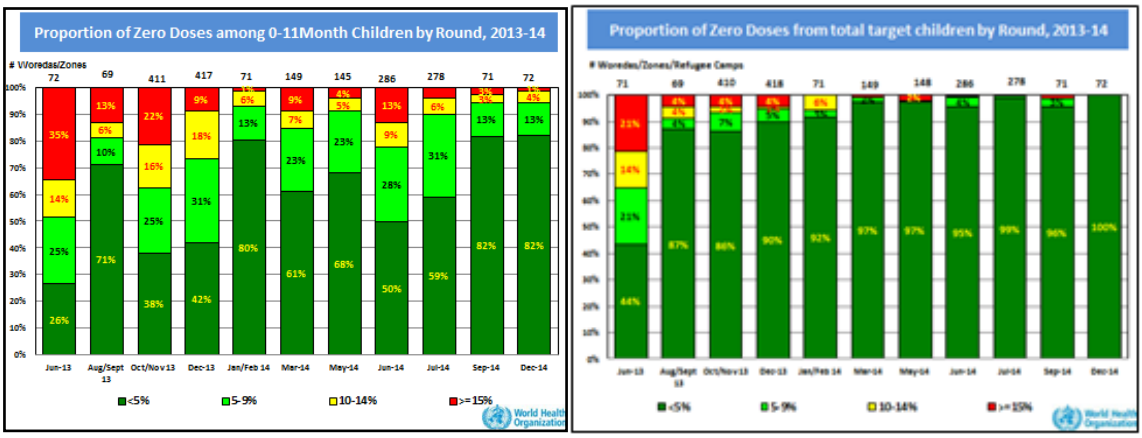
Figure 2: Proportion of children assessed with finger mark, May–December 2014, Dollo Zone, Somali Region

Woreda	% Finger Marked				
	Eigth/May	Ninth/June	Tenth/July	Eleventh/Sept	Twelveth/Dec
Bokh	91%	86%	93%	91%	93%
Danot	74%	96%	64%	86%	94%
Daratole	95%	99%	95%	91%	98%
Galadi	4%	62%	76%	88%	96%
Warder	99%	73%	73%	93%	94%
Zonal Total	65%	79%	80%	90%	95%



The trend in zero dose children has progressively declined with more districts (woredas) achieving less than 5% zero dose children through independent monitoring data (Figure 3).

Figure 3: Trend in zero dose children, June 2013 – December 2014, Ethiopia



There was a human resources surge through WHO and UNICEF. WHO deployed 41 national outbreak response consultants, 4 international surge staff and 8 STOP team (with support from CDC). The surge staffs were deployed to national, regional, zonal and woreda levels; 31 national and 4 international staff were deployed to Somali Region.

The outbreak response was used as an opportunity to strengthen routine EPI. Routine EPI key messages were integrated in the communications and mobilization for polio vaccination; routine vaccination was provided through SIAs in several zones with hard to reach areas and pastoralist populations of Somali Region; the human resources surge for the response addressed routine EPI strengthening through supportive supervision, monitoring and capacity building.

Three external polio outbreak assessments were conducted in January, June and November to assess the progress in the outbreak response. The November assessment noted significant progress made in outbreak response activities and improvement in SIA quality in the polio-infected area particularly in reaching the pastoral communities. However, further improvements are still needed in strengthening surveillance and routine immunization in the outbreak zone.

1.1.2 AFP Surveillance

AFP surveillance at the national level continues to meet certification standard performance. Marked improvement in surveillance performance was noted in 2014 compared to 2013 at the sub national level. By end of 2014, all regions had achieved the minimum non polio AFP detection rate with Somali Region having the highest detection at 4.9/100,000 under-15 population (the national average was 3.1/100,000). The minimum stool adequacy rate was achieved in all regions except Somali (74%), Gambella (69%) and Harar (67%). However, improvement in the stool adequacy rate was noted in Somali region between 2013 and 2014, from 64% to 74%. 73% of zones achieved the two key performance indicators (NPAFP detection rate and stool adequacy rate) in 2014, compared to 60% in 2013.

Efforts to strengthen surveillance, in 2014, included human resources surge for surveillance, roll out of community based surveillance in selected zones of Somali Region, capacity building, supportive supervision, review meetings at national and regional level and close monitoring of indicators and staff deliverables with regular feedback.

Figure 4: AFP Surveillance Performance Indicators by zone, Ethiopia, 2013-2014

# of Zones	2013	2014
Achieving Both Indicators	58 (60%)	70 (73%)
Only one indicator	30 (32%)	18 (19%)
Doesn't Achieve both Indicators	2 (2%)	4 (4%)
Silent Zones	6 (6%)	4 (4%)

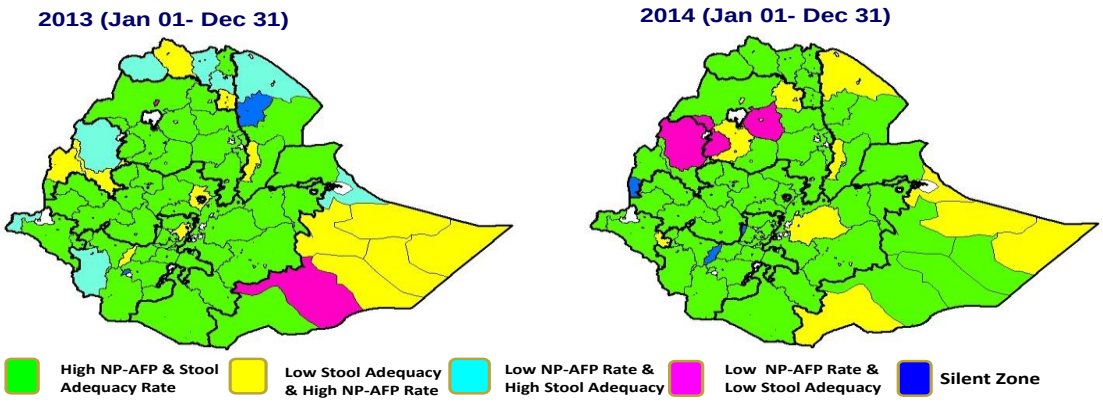
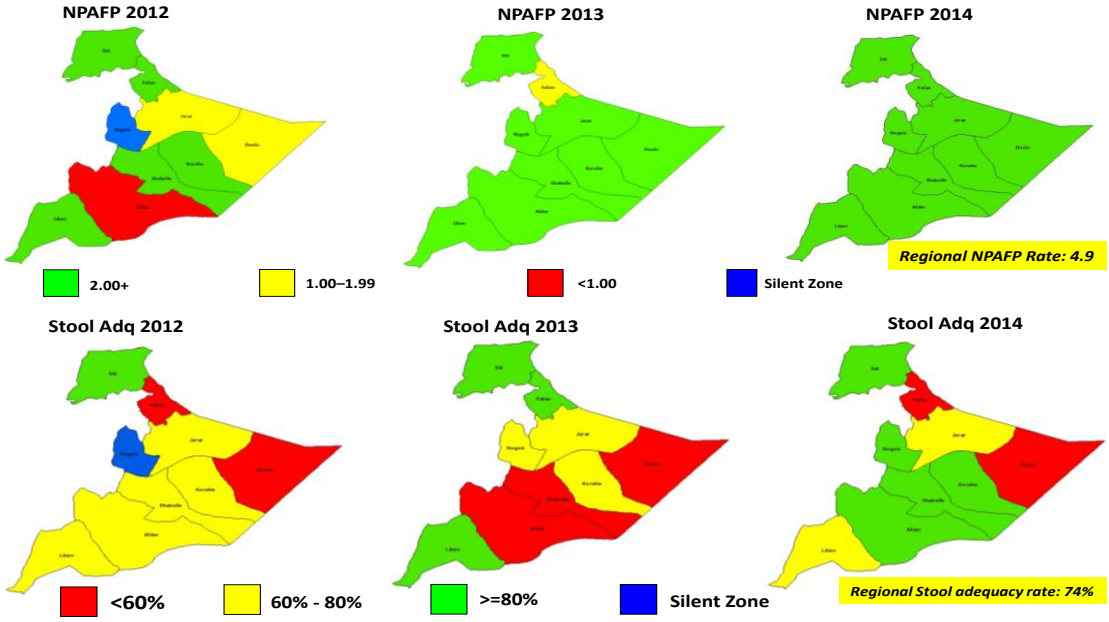


Figure 5: AFP Surveillance performance, Somali Region, Ethiopia, 2012-2014



1.1.3 Cross Border Collaboration

Cross border collaboration has been heightened, particularly with Somalia and Kenya, which resulted in joint planning, launching and implementation activities in June, July, August and November. International cross-border meetings between Ethiopia and other bordering countries in the HoA were held in May (in Ethiopia) and October (in Djibouti) 2014 to share strategies that insure that no child is missed during polio vaccination campaigns.

Joint launching of Polio SIA in Togwochale by HE State Minister for Health, Vice President of Somali Region, Governor of Somaliland the WHO Representative, June 2014

Permanent vaccination posts continue to function at transit and cross border points in Somali (44), Gambella (7) and Benshangul Gumz (5) regions providing OPV and other vaccines for refugees, pastoralists and travelers. However, maintaining the functionality of all vaccination posts has been challenging, particularly in Somali region.

Cross border transit vaccination post at Ethiopia-Somaliland

Table 1: Border Vaccination Sites, Ethiopia, 2014

Border Region	# Transit/ Permanent vaccination points	# Vaccinated (2014)	
		Under 5 years	Under 15 years
Somali	44		64,388
Gambella	7 (5 at refugee camps, 2 at transit centers)	23,947	49,146
Benshangul Gumz	5 (3 camps, 2 transit)	18,904	18,106

Border vaccination teams at Ethiopia-Djibouti border(L) and Ethiopia-Somalia

1.1.4 Temporary Recommendations of Polio Emergency Committee under IHR

On 5 May, 2014, the Director-General of the World Health Organization declared the international spread of (WPV to be a Public Health Emergency of International Concern (PHEIC). This decision was made after consultation with an Emergency Committee, which was convened under the International Health Regulations (2005). Temporary recommendations were made by the Committee for *'States Currently Exporting Wild Poliovirus'* and *'States Infected with Wild Poliovirus but not Currently Exporting'*. Ethiopia is among countries in the 2nd category (along with Afghanistan, Iraq, Israel, Nigeria and Somalia) with the following temporary recommendations:

- Officially declare, if not already done, at the level of head of state or government, that the interruption of poliovirus transmission is a national public health emergency;
- Encourage residents and long-term visitors to receive a dose of OPV or IPV 4 weeks to 12 months prior to international travel; those undertaking urgent travel (i.e. within 4 weeks) should be encouraged to receive a dose at least by the time of departure;
- Ensure that travelers who receive such vaccination have access to an appropriate document to record their polio vaccination status;
- Maintain these measures until the following criteria have been met: (i) at least 6 months have passed without the detection of WPV transmission in the country from any source, and (ii) there is documentation of full application of high quality eradication activities in all infected and high risk areas; in the absence of such documentation these measures should be maintained until at least 12 months have passed without evidence of transmission.

The Government of Ethiopia with support from WHO was able to address the temporary recommendations. Vaccination sites for polio for travellers were established at the international travellers' vaccination clinic at the Black Lion Hospital (national referral hospital in Addis Ababa), UN Clinic and African Union Clinic. OPV was availed along with

educational material to encourage and sensitize travellers to receive a dose prior to international travel. Close to 15,000 doses were administered for international travellers between June and December 2014.

Key Achievements – Polio Eradication

- ✓ Progressive improvement in coverage through independent monitoring to reach at least 90% in all target zones including the outbreak zone.
- ✓ Single case of WPV was confirmed in 2014 with date of onset of paralysis on 5 January 2014 (compared to 9 cases in 2013) in Warder District, Dollo Zone of Somali Region.
- ✓ Increase in proportion of zones achieving the key surveillance performance indicators from 60% in 2013 to 71% 2014.
- ✓ Three external polio outbreak assessments were conducted in January, June and November 2014, and confirmed significant progress in the outbreak response.
- ✓ Implementation of temporary recommendations of the Polio Emergency Committee under IHR and removal of Ethiopia from the list of infected countries.

1.2 Reducing the Un/ Under Vaccinated children

Implementation of the National Routine Immunization Improvement Plan 2014-2015 (RIIP) was a key priority in WHO support to the Government in 2014. Support was provided for program coordination at all levels, focused support in poor performing zones, advocacy, social mobilization, logistics management and new vaccines introduction.

1.2.1 Program Coordination

The Minister of Health established a special unit called the Ministerial Delivery Unit (MDU) to oversee eight key priority programs of the FMOH, including EPI. Close oversight of EPI is being done by the MDU including regular briefings to the Minister on progress of the program. EPI has been set as a measure of performance for all regions, and Regional Health Bureaus will be expected to report on EPI during bi-monthly Joint Steering Committee meetings chaired by the Minister.

Main and Technical ICCs TOR and composition have been defined. A National Task Force is in place with sub working groups (Logistics, Communication, Planning/M&E) and meets every two weeks. Similar coordination Task Forces exist at regional level. WHO is present in all sub working groups and is the Secretariat of the ICC. The National and Regional

Command posts that were established to coordinate the polio outbreak response activities, evolved in 2014 to also follow implementation of the routine EPI plan.

FMOH completed a restructuring exercise in 2013. An EPI team was designated with 8 experts and a Coordinator in late 2013. WHO played a key advocacy role for the success of the restructuring and supported the newly established case team by assigning a Direct Technical Assistant to work closely with the team. In February 2014, WHO Country Office with support from IST/ESA, organized an induction course for the new EPI case team of the FMOH. The course was followed by a two day retreat involving partners to discuss the annual work plan with focus on moving the routine EPI improvement plan forward.

Induction course for EPI team and EPI Retreat, Bishoftu, February 2014

National EPI quarterly review meetings were conducted in the presence of Government officials at Federal and Regional level and all EPI partners. The review meetings focused on routine immunization, polio eradication and surveillance.

1.2.2 Routine EPI Improvement Plan

The Ministry conducted the 2007 EFY health sector planning during the 2nd quarter of 2014 where special emphasis was given to undertake in-depth situational analysis of the immunization program and preparation of an appropriate plan to improve performance. One day was dedicated for immunization at all levels to orient participants of the district based planning on RED orientation allowing institutionalization of RED micro planning and transferring the concept of RED approach to a wide range of health professionals. WHO and other EPI partners supported the RED orientation in all regions in May 2014.

Efforts are ongoing at Federal and Regional levels to implement and closely monitor the improvement plan. The technical ICC on 26 March 2014 endorsed the monitoring frame work for RIIP implementation.

A total of 51 Technical Assistants (TAs) were trained and deployed in July 2014 to work with the respective zonal health offices in poor performing zones, with support from WHO (15), UNICEF (20), CDC START (10) and L-10K (6). Training was provided to the 51 TAs on MLM

modules prior to deployment. The TAs provided support for baseline assessments, micro planning, capacity building, data management and supportive supervision.

The FMOH, WHO and UNICEF submitted a joint proposal to mobilize funds for routine immunization activities using GPEI funding. The funds secured were used for IIP and MLM trainings, and Job aid printing.

Micro planning and training sessions for polio SIAs were maximized in high risk areas to sensitize health workers and health extension workers on routine EPI.

Table 2: Routine EPI Trainings conducted with support from WHO, 2014, Ethiopia

Type of training	Region	Target zones	Number of trainees	Cadre	Type of support	Total
Immunization in Practice (IIP)	Amhara	1 (one)	103	HC EPI FPs	Technical & financial	**892**
	Addis Ababa	All sub cities	95	HC EPI FPs	Technical & financial	
	Addis Ababa	All sub cities	30	HC EPI FPs	Technical	
	Oromia	4 (Four)	354	HC EPI FPs	Technical & financial	
	SNNPR	3 (Three)	310	HC EPI FPs	Technical & financial	
Mid-Level Managers (MLM) Training	7 (seven) regions	51 priority zones	51	Zonal Immunization TAs	Technical & financial	**76**

Based on available data for 2014, the national pentavalent 3 coverage for 2014 is 84% (with 82% completeness of reporting). 49% of zones achieved above 80% coverage compared to 29% in 2013 (Figure 6 and 7).

Figure 6: National Routine EPI Coverage, 2003- 2014[1], Ethiopia

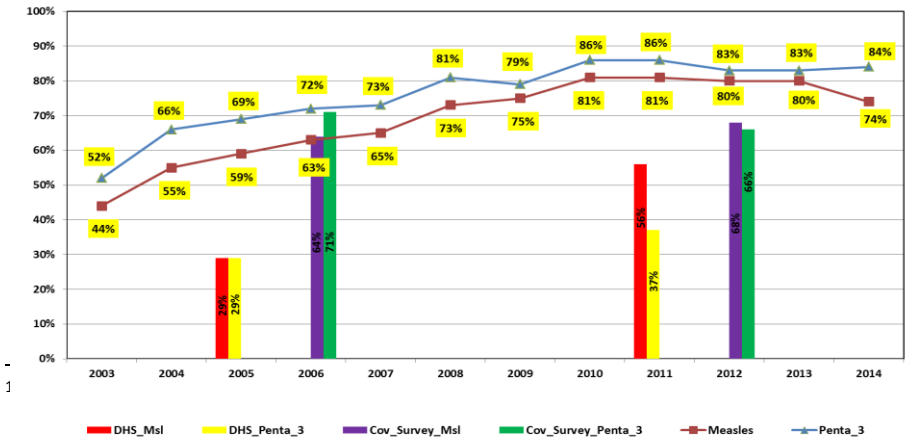


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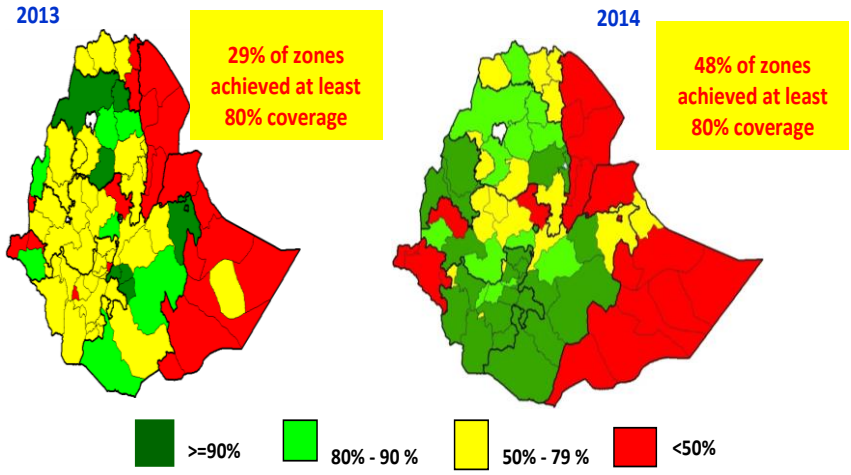
Figure 7: EPI Performance at Zonal Level, 2013-2014, Ethiopia



1.2.4 WHO-CDC Collaboration in Capacity Building

East African Training Programme (EATP)

The EATP is collaboration between the FMOH, WHO and CDC on capacity building for routine immunization and surveillance to achieve and sustain the polio eradication initiative in Ethiopia. 2014 was the second year of implementation of the project. The project was implemented in two Zones (Farfan and Siti) of Somali Region and East Hararghe Zone of Oromia Region. The criteria for selection of the zones was based on ongoing WPV circulation, low rates of implementation of routine immunization and surveillance, geographical proximity of the zones and high population mobility within the zones.

Key activities conducted included:

- Advocacy visits to the respective Regional Health Bureaus' and Zone Health Departments.
- Baseline assessment including partner mapping in the three Zones and 27 woredas.
- Capacity building trainings (combined EPI IIP/PHEM IDSR VPD Surveillance training) for Zones and Woreda Health Offices and EPI-MLM modular training:
    a) 34 EPI/PHEM officers from two Zones (Farfan, Sitti) and 16 woredas were trained in Jigjiga Town on 26 February to 06 March 2014.
    b) 54 health workers from seven woredas were trained in Farfan Zone, Jigjiga on April 8-15, 2014.
    c) 44 health workers from seven woredas from Sitti and two woredas from Farfan Zone were trained in Dire Dawa on May 22-29, 2014.

d) 45 Zone and Woreda EPI/PHEM officers were trained on 10th - 17th December 2014.

- Post training follow-up:

a) 29 EPI/PHEM Officers participated in the post training follow up project workshop conducted in Jigjiga on November 15-17/2014. Twelve job related project reports were presented (seven from Farfan zone and five from Siti zone). All Woredas submitted their reports in hard copy to the RHB.
b) Seven post training job-related projects were drafted but only 4 were submitted from East Hararghe Zone of Oromia Region. Problems related with funding and competing priorities combined with time shortage made it difficult to complete the projects in the Zone.

- Mentoring /coaching activities:

a) 33 woredas in the three target zones of the two regions were mentored regularly
b) Two Zones and 15 Woreda EPI/PHEM Officers are currently working on post training job related projects.

- Operations research on *"Partnering with Animal Health Services to improve childhood immunization coverage in mobile pastoral community in Afar Region of Ethiopia"* was conducted in 2014.

  Data entry, cleaning and analysis has been completed and a preliminary report will be available for a dissemination workshop planned in March 2015.

Strengthening Technical Assistance in Routine Immunization Training in Ethiopia (START E)

With support from CDC, a START project was launched in Ethiopia in 2014. START is part of efforts to increase routine immunization coverage in intermediate performing zones within the frame work of the Routine EPI Improvement plan.

In consultation with FMOH, 10 zones from 4 regions were selected (Zone 5, Afar; S. Gondar and Kemisse Zones from Amhara; S.W Shoa, N. Shoa, W. Arsi and Kellem Wollega, Oromia; Gurage, Kembata and Hadiya Zones of Oromia). Sixty woredas and over 180 Health Centers are selected for the implementation for the first six months of the project. 10 TAs were recruited and are providing on job capacity building, mentoring and intensive supervision at health facility level in prioritized woredas.

Key activities implemented included:

- MLM training was given to ten START Zonal TAs prior to deployment. Deployment was done in September 2014 to all the target zones.
- Logistical and financial support was provided for Woreda Officers accompanying Zonal TAs and orientation for woreda health workers.
- Activities were monitored on weekly and monthly basis.
- Central level supportive supervision was conducted to five target zones and select woreda offices. Main areas such as RED categorization, RED MP and session

planning, Vaccine management, updating Immunization monitoring, dropouts tracking, proper recording and reporting of immunization data were observed to be well covered. An increasing trend in coverage is observed in the visited cluster health centers.

1.2.3 Advocacy and Social Mobilization

The fourth African Vaccination Week (AVW) was colorfully commemorated on 21 April 2014 in Amhara Region in the presence of HE The State Minister of Health, Vice President of Amhara Regional State, Head of the Regional Health Bureau, Mayor of North Gondar zone, Members of the Parliament, representatives from partner organizations, community groups, civil society organizations and the media.

The 4th AVW was launched in North Gondar zone with the theme: "*Vaccination a shared responsibility"* and the opportunity was maximized to advocate and sensitize decision makers and communities on routine EPI. Messages on routine immunization were aired through national and regional media using five local languages.

HE The State Minister of Health, Dr Amir and the WHO Representative at the launching of the AVW in North Gondar, Amhara Region, April 2014

Several advocacy events were held for polio eradication at central and field level. World Polio Day was observed across the world including Ethiopia on 24th October 2014. The Ministry of Health, WHO, UNICEF and Rotary marked the day in a commemorative ceremony held at the UNECA. The event celebrated the achievements of all partners and stakeholders in the final effort, 'the last mile', to eliminate polio from the world. The following day, hundreds of people participated in a World Polio Day march from the Ministry of Health to the Ethio-Cuba friendship square. The march, organized by the National Polio-Plus Committee (NPPC), Rotarians and Rotaractors was held on Saturday, October 25th to raise awareness about the disease.

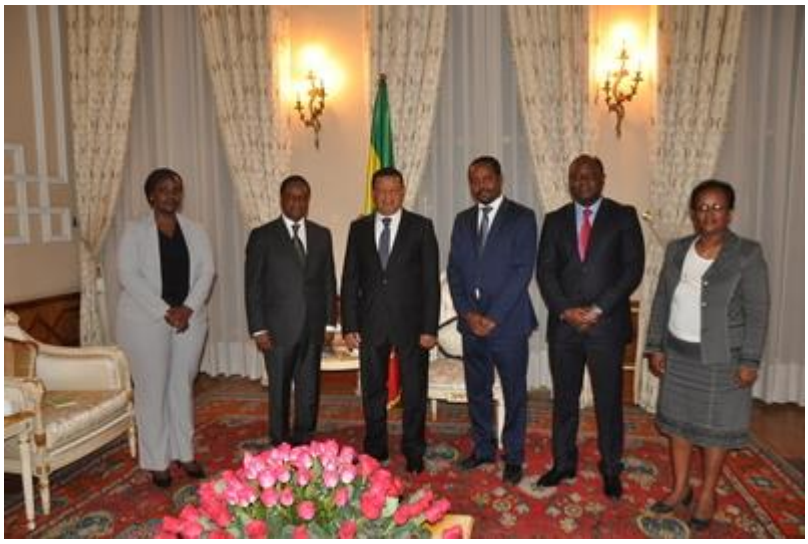
World Polio Day, 24 October 2014

Media captions, The Capital, World Polio Day, 24 October 2014

Communication plans were developed and implemented for the polio and Meningitis A vaccination campaigns. TV and radio and messages for mobilizers were developed for Men A and utilized. 3000 leaflets and posters for Men A were developed. Job Aids for health workers and health extension workers were developed an distributed.

A high level advocacy visit was undertaken by the WHO Representative to HE The President of the Federal Democratic Republic of Ethiopia, H.E Dr. Mulatu Teshome, in October 2014.

The President, as Champion of the Global Alliance for Vaccines and Immunization (GAVI), expressed his personal commitment to support and advocate for the immunization program in Ethiopia.



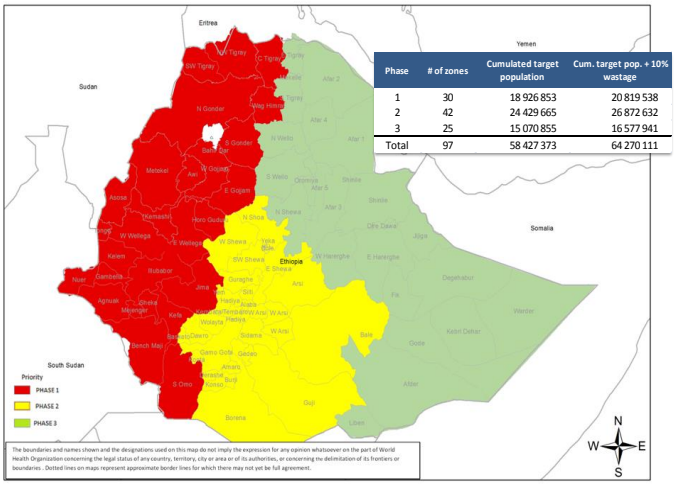
L-R: Dr Fiona Braka, Dr Pierre M'pele-Kilebou, H.E. President Mulatu Teshome, Dr Abebayehu Assefa, Mr Pierre Lessimi, Mrs Lulit Zewdie (Acting Director, International Organizations, MoFA, October 2014

1.2.4 New Vaccine Introduction

The 2nd phase of the Meningitis A campaign was implemented in 3 regions, namely, Addis Ababa, SNNPR and some zones of Oromia targeting 26,904,650 people 1- 29 years of age during October 2014. Vaccines and logistics were distributed timely. Micro-planning and training at different levels was undertaken. An international consultant arrived in country in the first week of August with support from WHO and assisted with preparations, implementation and monitoring of the campaign activities A total of 26,269,005 (97.3%) were vaccinated. A vaccine coverage survey is underway to assess campaign coverage during Phase II.

Nationwide rollout of rotavirus vaccine introduction was done in 2014 following the launching in November 2013. The Rota vaccine introduction that had been postponed in Somali region due to the polio outbreak response activities was implemented in 2014. The launching event was held on the 28th of August in Jijiga town of Somali Region.

Figure 8: Meningitis A introduction target zones, 2013-2015, Ethiopia



Phase	# of zones	Cumulated target population	Cum. target pop. + 10% wastage
1	30	18 926 853	20 819 538
2	42	24 429 665	26 872 632
3	25	15 070 855	16 577 941
Total	97	58 427 373	64 270 111

Launch of rotavirus vaccine introduction by HE The Minister of Health, Dr Kesete, November 2013

MenAfrivac vaccination session at a high school at Shebedimo Woreda, SNNPR, October 2014

In March 2014, the country submitted a proposal to GAVI for IPV introduction. The application was approved with clarifications requested. The introduction is planned for 2015 as a single dose at 14 weeks of age. A national IPV introduction plan of action was developed and a Technical Working Group established to initiate the preparations. The vaccine registration is in process for the 5 dose liquid formulation. The EPI Policy guideline, HMIS tools and IIP training guideline were revised to incorporate IPV.

An application for a HPV demonstration project was submitted to GAVI and approval, with recommendations, granted in December 2014.

1.2.5 Logistics Management

Support was provided for implementation of the national cold chain rehabilitation plan, PFSA transition plan and vaccine management plan. PFSA procured 17 cold rooms for its zonal hubs. The first phase of the cold chain transition plan was developed by PFSA and will be piloted in selected regions/ zones. Cold chain expansion was undertaken: 1000 solar Direct Drive refrigerators were procured and distribution initiated in 2014 - 170 solar refrigerators in remote areas, 650 ice lined refrigerators and 8,000 vaccine carriers.

Temperature monitoring devices were procured by the Clinton Health Access Initiative (CHAI). Training on using continuous temperature monitoring device (Fridge tag) was facilitated for health workers at woredas and health facility levels. Fridge tags were distributed to all regions to improve temperature monitoring of vaccines at all levels. Cold chain maintenance tools have been distributed to all Woredas and most zones and scaled up. Cold chain maintenance campaigns were implemented in the four pastoralist regions (601 refrigerators were maintained) supported by Senior Technicians from central and regional levels, with financial support from CHAI.

Key Achievements - Routine EPI Strengthening

- ✓ DPT-HepB-Hib3 coverage achievement: 84% at national level; 48% of zones achieved above 80% coverage in 2014 compared to 29% in 2013 *(82% completeness of reporting)*
- ✓ 26.3 million People aged 1-29 years (97%) reached with Meningitis A conjugate vaccine.
- ✓ Nationwide rollout of rotavirus vaccine introduction done with successful launching in Somali Region
- ✓ 968 operational level health workers trained on routine EPI
- ✓ Cold chain expansion facilitated at Federal and Regional levels

1.3 Accelerated Disease Control

1.3.1 Measles Elimination

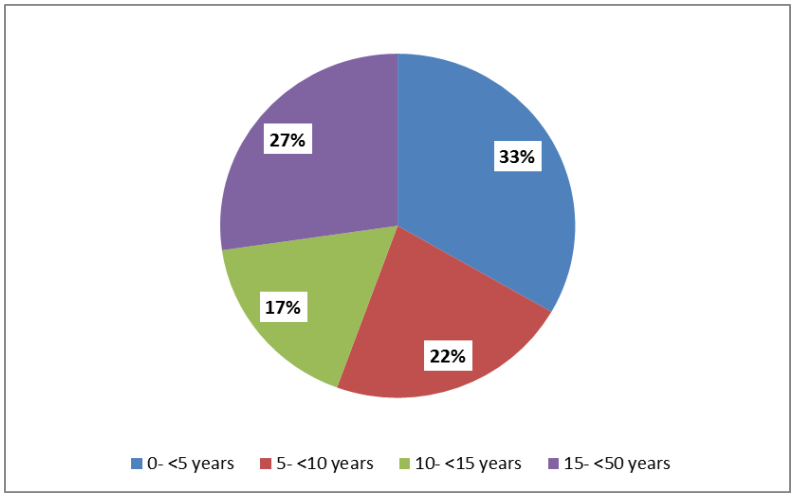
Ethiopia adopted the regional measles mortality reduction goal in 2002 and has been implementing the recommended strategies which include increasing the coverage of the first dose of measles vaccine, providing a second opportunity through SIAs, implementing sensitive disease surveillance, and improving case management. In 2012, Ethiopia adopted the regional measles elimination goal and developed a National Measles Strategic Elimination Plan, 2012-2020. Several efforts have been made to implement the elimination

strategies since 2012, including implementation of a follow up measles campaign targeting under-five children in 2013.

Key activities conducted in 2014 included:

- Localized measles outbreak investigation and response activities in different parts of the country were implemented. A total of 302 outbreaks were registered with 6,401 confirmed "outbreak associated" cases, and 249 woredas were affected. 67% of measles cases were above 5 years old (Figure 9).
- An external assessment of the recurrent measles outbreaks was done in SNNPR. Based on the findings, the main ICC chaired by the State Minister of Health decided to plan for an under 15 measles campaign in 2015.
- A proposal was developed and submitted to GAVI for consideration in 2014. Additional resource mobilization initiatives are underway.
- Efforts to increase routine coverage of the first dose of measles vaccine were implemented through the framework of the routine EPI improvement plan.
- Vaccination of high risk populations including refugees in Gambella, Benshangul Gumz and Somali Regions was done at entry points.

Figure 9: Age group distribution of measles confirmed cases, 2014, Ethiopia



Case based Measles Surveillance

The measles case based surveillance in the country is linked with AFP surveillance within the IDSR framework, and all active search and sensitization conducted for AFP cases also apply for measles surveillance.

During 2014, a total of 16,702 clinically suspected cases were reported through the system of which 5,418 (33%) of the cases are reported through measles case based surveillance,

while the rest 10,789 (67%) are through line lists. Of the cases reported in 2014, a total of 13,301 cases are confirmed cases including 2,373 (18%) laboratory confirmed, 5,692 (43%) epi-linked cases and 5,236 (39%) clinically compatible cases. The number of reporting woredas has shown an increasing trend with exception of 2014 where 80% of the woredas have reported at least one case with blood specimen.

The measles incidence showed an increasing trend from 2002 to 2011. From 2012 onward it showed a declining trend. On the contrary, the positivity rate has increased for the last two years reaching 35% and 53% in 2013 and 2014 respectively (Table . Additionally, the number and extent of epidemics has increased greatly particularly for the last two years including the number of woredas affected. In 2013 and 2014, a total of 243 and 302 outbreaks were registered, while 192 and 249 woredas were affected respectively 9Table 4).

Table 3: Measles Surveillance Indicators, 2008 - 2014, Ethiopia

Indicators	Target	2008	2009	2010	2011	2012	2013	2014
Annualized rate of investigation of suspected measles cases (/100,000)	>=2	3.0	3.7	3.8	7.3	5.1	6.2	6.0
Proportion of Woredas with >=1 case per 100,000 with a blood specimen (%)	80	85	90	83	96	99	100	80
Proportion of reported measles cases with blood specimen (%)	80	100	99.9	100	100	96	99	91
Proportion of measles IgM+ (%)	<10	38.7	21.5	14.3	29	26	35	53

Table 4: Measles outbreaks, 2008 - 2014, Ethiopia

Indicators	2008	2009	2010	2011	2012	2013	2014
No. of Measles Outbreaks	129	76	60	196	146	243	302
Woreda Affected with Measles Outbreaks	89	59	51	143	125	192	249
Outbreak cases Confirmed by Lab	564	309	248	945	623	1402	1821
Epi-linked cases	533	3092	1530	2582	3178	3982	4580
Total Confirmed Outbreak Cases	1097	3201	1776	3527	3801	5384	6401

Key activities conducted include:

1. Regular active search and sensitization at field level.

2. Quarterly review meetings along with other VPD surveillance at national as well as at sub national level to share feedback.
3. Several capacity building activities at field level for focal persons, integrated with VPD/ IDSR trainings.
4. Outbreak investigation, response and management done locally by affected Woredas.
5. External assessment of the recurrent measles outbreaks in SNNPR.
6. Dissemination of weekly and monthly updates to Government at different levels, IST/AFRO, partners and field staff.
7. Assessment of potential sub-national measles laboratories with support from IST and HQ. Two sub-national laboratories were identified and efforts are underway to initiate activities.

1.3.2 Maternal and Neonatal Tetanus Elimination

Ethiopia achieved partial validation status for maternal and neonatal tetanus (MNT) elimination in 2012. Validation is pending in Somali Region as TT SIAs are still to be completed in 4 zones. During 2014, the 2nd round TT SIAs were conducted in 2 zones: Nogob and Dollo; Jarar and Korahey conducted the 2nd round SIAs in 2013. The results of the 1st and 2nd doses for the 4 pending zones are outlined in table 5.

The 3rd round TT SIAs for the four pending zones are planned for implementation by mid-2015.

Table 5: TT SIAs achievement, Somali Region, Ethiopia

Region	Zone	Eligible	TT dose	First Round	Second Round	Third Round	Total Vaccinated	Coverage %
				Oct-12	Feb 2013 & Oct 2014			
Somali	Jarar	126,245	TT1	117,311	6731		124,042	98.3
			TT2		112,516		112,516	89.1
			TT3				0	
	Korahey	83,761	TT1	75,078	6754		81,832	97.7
			TT2		72,402		72,402	86.4
			TT3				0	
	Dollo	80,084	TT1	77,190	3,272		80,462	100.5
			TT2		60,024		60,024	71.7
			TT3				0	
	Nogob	111,312	TT1	96,013	5,958		101,971	91.6
			TT2		91,833		91,833	82.5
			TT3				0	

Neonatal tetanus surveillance is carried out in conjunction with AFP and measles surveillance. The strategies implemented have impacted positively the elimination program planned. MNT elimination has been validated, excluding Somali Region. However, the strategies to maintain MNTE need further strengthening particularly NNT surveillance to identify cases (to achieve the expected <1 per 1,000 live births), vaccination and clean delivery strategies.

In 2013 and 2014 a total of 15 and 20 cases are reported respectively. Of the reported cases in 2014, majority of the cases are from Oromia and SNNPR Regions.

Key activities conducted included:

1. Regular active search and sensitization conducted along with AFP/Measles surveillance.
2. Quarterly review conducted along with other VPD surveillance at national as well as at sub national level.
3. Several capacity building activities along with other VDP surveillance trainings.
4. Investigation and response to reported cases with Woreda and health facility focal persons supported by WHO Field officers.
5. Preparation and dissemination of weekly and monthly updates to IST/AFRO, partners and to the field staff.

1.3.3 Surveillance for New Vaccines

Rotavirus Surveillance

WHO continued to work in collaboration with FMOH and EPHI to monitor the epidemiological impact after rotavirus vaccine introduction. Surveillance activities were initiated in selected hospital sentinel sites in 2007 at the Black Lion Hospital with further expansion to other two sites in Yekatit 12 Hospital and Betezata Hospital in 2008 and 2011 respectively. Sentinel site Coordinators and site members were designated and trained to coordinate and follow the day to day activities of the site. Rotavirus vaccine was introduced in November 2013.

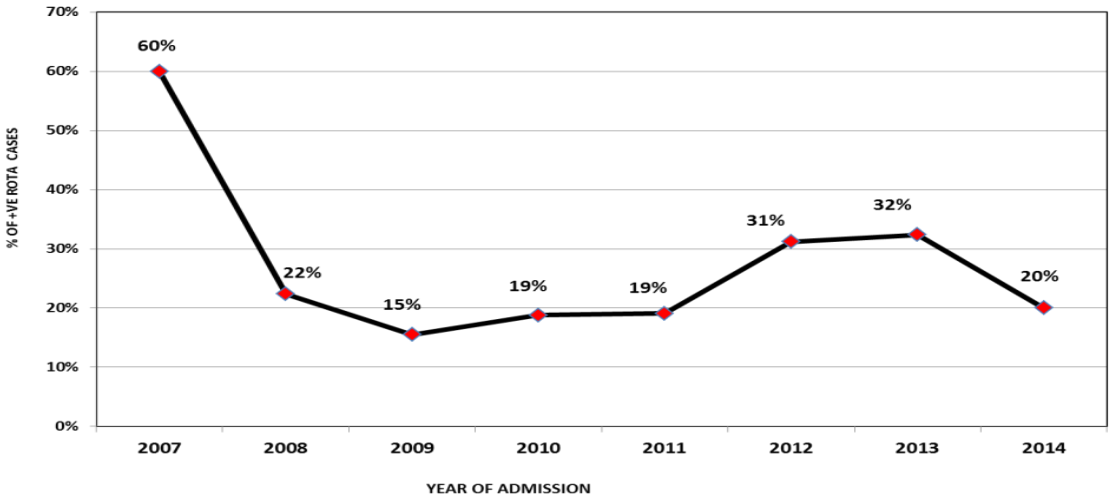
Key Achievements

- The sites are enrolling a significant number of cases however the level of performance indicators varies widely among the three sentinel sites.
- A quarterly review meeting and refresher training were conducted
- Data is regularly analyzed and shared with the sentinel sites, IST and AFRO.
- For quality check and genotyping, samples were sent to referral laboratories within the Regional Laboratory Network.

Table 6: Rotavirus sentinel surveillance indicators, 2007-2014, Ethiopia

Indicator	*Target*	2007	2008	2009	2010	2011	2012	2013	2014
# of <5 acute diarrhea hospitalizations reported		60	210	454	533	524	295	352	310
% stool specimens collected within 2 days of admission	>=90 %	97%	97%	95%	99%	100%	100%	100%	100%
% of collected stool specimens that arrive at laboratory for testing	>=95%	100%	100%	100%	100%	100%	100%	100%	100%
% of received specimens that are tested	>=90 %	100%	100%	97%	100%	100%	100%	100%	100%
(%) ELISA Rotavirus confirmed cases	>=20%	60%	22%	15%	19%	19%	31%	32%	20%

Figure 10: Rotavirus Positivity Rate, 2007-2014, Ethiopia



Pediatric Bacterial Meningitis Surveillance

Ethiopia has three hospitals conducting sentinel surveillance for pediatric bacterial meningitis (PBM): Tikur Anbessa Hospital, (TAH), Yekatit 12 Hospital and Gondar University Hospital, initiated in 2002, 2008 and 2009 respectively. The sites are generally tertiary-level hospitals, and the aim is to provide information on the burden of disease, and determine disease epidemiology by genotype and serotypes. Hib and Hep B vaccines were introduced in the routine immunization programme in May 2007, while Pneumococcal Conjugate Vaccine was introduced in 2012.

Key achievements:

- The sites are enrolling a significant number of cases; however the level of performance indicators varies widely among the three sentinel sites.
- Regular feedback is provided from the national level to the sentinel sites.

- A quarterly review meeting and refresher training were conducted
- Data is regularly analyzed and shared with the sentinel sites, IST and AFRO.
- For quality check and genotyping, samples were sent to referral laboratories within the Regional Laboratory network.

Table 7: Sentinel PBM Surveillance Indicator for all sentinel sites: 2008 –2014

Surveillance Indicator	Target	2008	2009	2010	2011	2012	2013	2014
% all meningitis cases with LPS done	90	97	99	100	100	100	100	100
% LPS Cases with Lab result	80	97	100	100	100	100	100	100
% of purulent (>100 WBC) with any meningitis Pathogens isolated	20	41	24	30	27	41	16	34
% of meningitis Pathogen cases with *H.influenzae* isolated	20	57	33	25	13	40	10	20

Figure 11: CSF Culture Results of Suspected PBM Cases, 2002 – 2014, Ethiopia

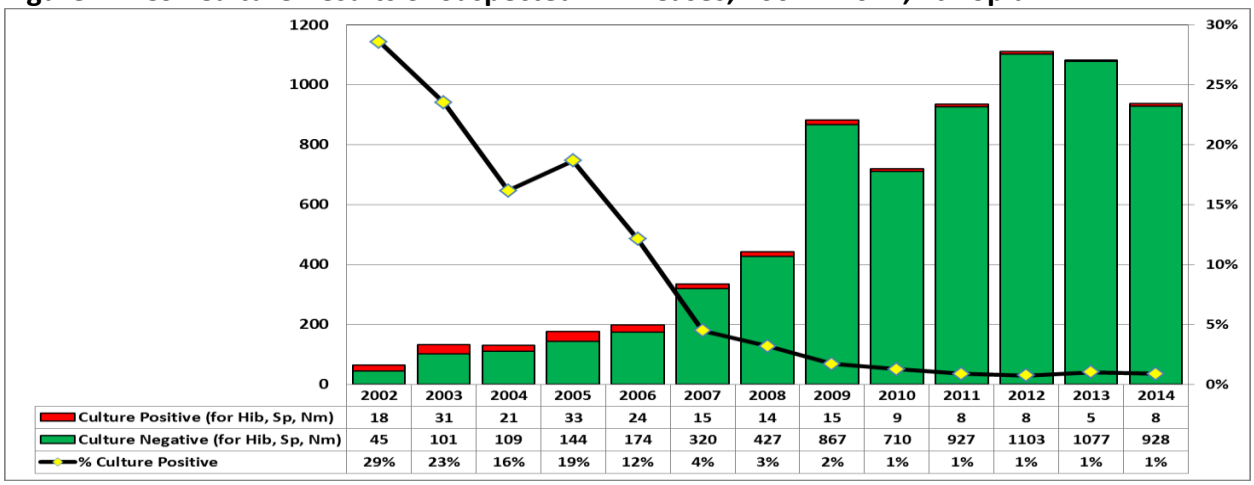
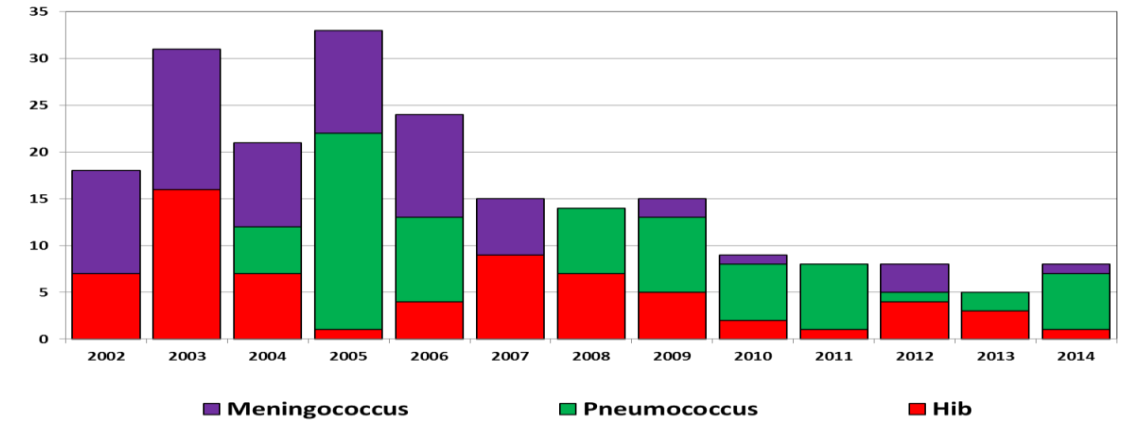


Figure 12: Etiologies identified for PBM, 2002 – 2014, Ethiopia



Intussusceptions Surveillance

Ethiopia introduced rotavirus vaccine into the routine immunization programme in late 2013[2]. Following vaccine introduction, Ethiopia initiated intussusceptions surveillance in April 2014. 8 sentinel sites were selected by the Federal Ministry of Health in July 2013 and accordingly from each site a Surgeon, Pediatrician and Nurse were selected and trained on retrospective and prospective intussusceptions surveillance. Of all sites selected, the Adama site is not functional while other sites are functioning very well. The most challenging problems in regard to surveillance are following up of cases at eight months and getting vaccination cards.

Table 8: Retrospective record review for Intussusceptions in selected hospitals, Ethiopia, 2014

SN	Site	Year (EFY)	# Total cases	Alive	Died
1	Dessie Hospital	2003-2006	10	8	2
2	Assela Hospital	2003-2006	2	2	0
3	Gondar Hospital	2003-2006	15	14	1
4	Hawassa Hospital	2000-2006	36	22	14
5	Black lion Hospital	2003-2006	79	72	7
6	Ayder Hospital	2002-2005	14	14	0
		Total	156	132	24

Table 9: Intussusception cases enrolled prospectively in sentinel sites, April-December 2014 and January 2015

Parameter/ Site	Black Lion	Gondar	Ayder	Dessie	Asela	Hawassa	Delchora	Total
Number of IS cases <12 months of age	8	2	9	6	2	4	-	31
Number (%) of IS cases with card confirmed vaccination status	1 (13%)	0 (0%)	4 (44%)	0 (0%)	1 (50%)	2 (50%)	-	8 (26%)
N (%) of IS cases that died	0 (0%)	0 (0%)	1 (11%)	2 (33%)	0 (0%)	2 (100%)	0 (0%)	5 (17%)

Key achievements:

1. A surveillance protocol was developed and adopted to the country context.

[2] Somali Region introduced rotavirus vaccine in 2014

2. On site supervision was conducted in March 2013 to assess the site preparedness and capability to initiate intussusceptions surveillance, and to discuss issues related to the surveillance activities.
3. Training was conducted for focal persons from each site to initiate the surveillance.
4. Retrospective intussusception surveillance review was conducted in six sentinel sites, and data entry is ongoing.
5. Prospective data was entered at central level monthly and shared with AFRO.
6. Maintained close monitoring and coordination to sentinel sites to solve problems raised through the process of implementation.
7. A review meeting and re-orientation was conducted in September with the sentinel sites.

Key Achievements – Accelerated Disease Control

- ✓ Measles case based surveillance indicators performance achieved at national level and regional level, excluding Somali Region
- ✓ 2nd round MNT SIAs in high risk zones of Somali Region completed
- ✓ Rotavirus and PBM Sentinel surveillance performance achieved
- ✓ Intussusceptions surveillance rolled out in 7 sentinel hospitals

1.4 Data Quality and Management

Continued dialogue and advocacy for strengthening routine EPI data management at all levels was done.

Efforts to strengthen the HMIS nationally continue. The electronic HMIS system was designed and piloted in 2012 and was scaled up over the years. The e-HMIS implementation status increased to over 91% of health facilities in 2014 covering 8 regions including the big regions (Oromia, Amhara and SNNPR). The e-HMIS system, in addition to improving the efficiency of the reporting system, allows data entry and editing only at the level of data generation points except in some instances where the clerical task is done by the Woreda health office due to infrastructure problems at the health facility levels. Based on the country efforts to improve quality of data, strong justification was provided for review of the WHO/UNICEF Joint estimates of EPI coverage, which was accepted by the Global Task Team. The joint estimate coverage increased in 2013 to 72% (the highest achieved over the years) from 60% in 2012.

Regions initiated submission of monthly routine EPI reports to the HMIS unit at FMOH. HMIS indicators were reviewed at national level and additional indicators incorporated on DPT1, OPV1 and 3, Rota 1 and 2 and vaccine utilization.

Data management support was provided at regional and zonal level by WHO Field staff through supportive supervision, capacity building and implementation of data quality self-assessments at woreda facility level. The 51 TAs deployed to focus zones were additionally tasked to support data management and facilitate monthly submission of routine EPI reports. Focused support was provided to Somali Region to strengthen data management through deployment of a Regional Data Manager.

WHO Field Staff utilized personal digital assistants (PDAs) for supportive supervision. The PDA data is shared with the central WCO M&E unit and analyzed monthly. Feedback is shared monthly for action, particularly at the field level.

Figure 13: Number of sites visited by WHO Field Staff, January – October 2014, Ethiopia

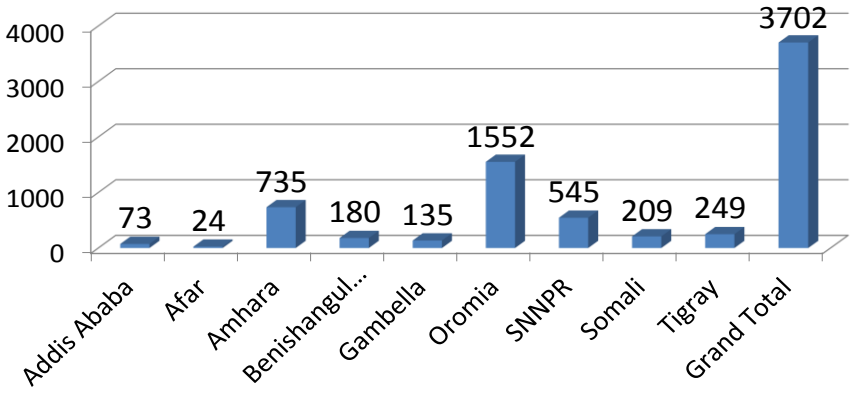


Figure 14: Availability and Use of Tally Sheets at Sites Visited, January – October 2014 (Source: PDA Data)

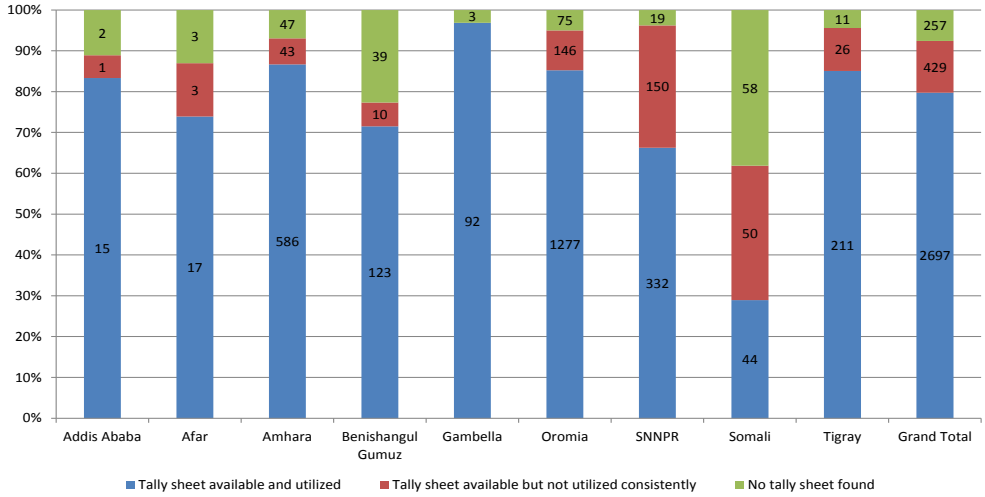
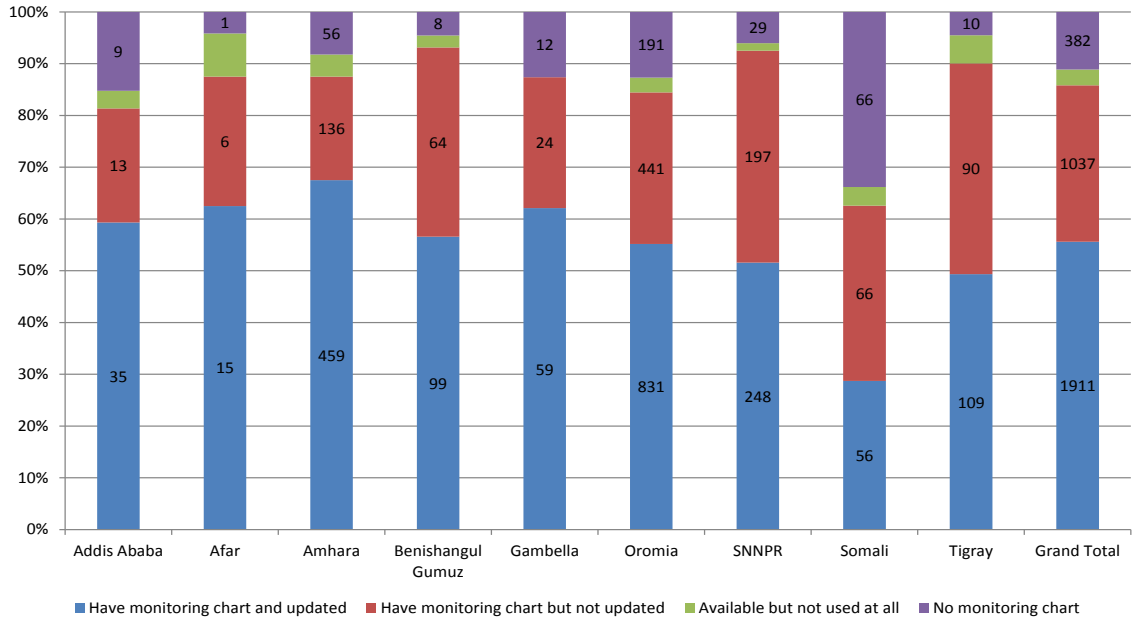


Figure 15: Availability and Use of EPI Monitoring Chart, January-October 2014 (Source: PDA Data)



Key achievements included:

- Initiation of monthly HMIS reporting for EPI data to central level for most regions
- Acceptable justification for improving quality of HMIS data resulting in increased WHO-UNICEF joint estimate from 60% in 2012 to 72% in 2013
- Additional HMIS indicators for EPI were approved and incorporated in the national HMIS: DPT1, OPV1 and 3, Rota 1 and 2 and vaccine utilization.
- Data management trainings conducted with facilitation from WHO including training for EPI laboratory and surveillance sentinel site data managers.

1.5. Support to the National EPI Laboratory

The National Polio and Measles Laboratory at EPHI in Ethiopia, is part of the Laboratory Network in the African region. The laboratory processes a large number of specimens for both polio and measles including testing measles negative results for rubella, and plays a critical role in achieving polio eradication and measles elimination goals.

The laboratory played a significant role in the response to the wild polio virus outbreak that was confirmed in 2013 in Ethiopia. The laboratory in collaboration with National Institute for Communicable Diseases (NICD) in South Africa and the Centers for Disease Control (CDC) in Atlanta, generate sequencing results that have been useful in detecting the nature of the

outbreak and geographical location of the viruses leading to immediate epidemiological response.

The laboratory is periodically accredited as part of the Global Polio Laboratory Network, and staffed with senior technical staff. Despite the increasing workload, the laboratory continues to maintain accreditation annually.

Key activities conducted:

1. Capacity building activities both in country and abroad for laboratory staff. In order to improve cell sensitivity, staff training on cell sensitivity testing and validation procedures was conducted in South Africa with participation from EPHI.
2. Accreditation visits for polio and measles were conducted with support from IST/AFRO/ HQ.
3. Two external assessments were conducted by AFRO/HQ to potential measles sub national laboratories, and efforts are underway to initiate the measles lab testing.
4. Laboratory coordinating meeting between EPHI and WHO were organized periodically to assess progress and discuss bottlenecks.
5. Facilitated the customs clearance for test kits and reagents that are donated to the country and facilitated shipment of samples to the Regional Reference Laboratory.

2. Polio Legacy Planning

As part of the Polio End Game Strategic Plan 2013-2018, activities were initiated at country related towards legacy planning, specifically:

- Documentation of polio assets and their contribution to the health system was done with support from AFRO and participation of Government and partners. The documentation process provided an opportunity to initiate the dialogue at country level on sustaining the assets in the long term after eradication of polio.
- Identification and documentation of select best practices in polio eradication, particularly through the outbreak response, for strengthening of the health system. Human and financial resources for the response were maximized to support strengthening of the system to sustain the achievements in polio eradication. The TOR for the surge capacity staff were broadened to include support to the routine system.
- Advocacy at different levels was initiated, including with the Government, on legacy planning.

The National Task Force for Laboratory Containment was re-invigorated in 2014 and the membership renewed. A plan for implementation of the phase 1 laboratory containment survey was developed and will be implemented in March 2015.

Preparations are underway to introduce IPV into the routine immunization schedule in 2015, with support from GAVI.

3. Challenges

- High staff turnover at all levels continues to be a challenge for sustaining technical expertise in EPI. Furthermore, staff capacity is inadequate necessitating frequent capacity building.
- Persistent low routine EPI coverage in pastoralist regions poses continued risk for importation and outbreaks.
- Measles outbreaks are occurring in several parts of the country with 62% of cases in 2014 being above 5 years of age. There were inadequate resources to conduct a wide age campaign in 2013 coupled with sub optimal population immunity of the 1st dose of measles vaccine, resulting in large scale outbreaks.
- Timeliness of reporting of monthly routine EPI HMIS data to the central level is not yet optimal. The monitoring of the routine EPI improvement plan and outcomes is a challenge.
- Competing activities, particularly polio outbreak response, affected the timely implementation of some key routine EPI activities.
- Responding to the polio outbreak in the specific context of Somali Region (pastoralist population, security restrictions, communication barriers and a long, open porous border) posed several operational challenges.
- Community awareness about AFP surveillance is suboptimal in Somali Region leading to late detection of cases. 4 out of 9 zones in Somali region did not meet the minimum stool adequacy rate in 2014.
- Funding disbursement challenges particularly to implementing partners were a challenge.

4. Perspectives for 2015

The key priorities for 2015 will be in continued implementation of the routine EPI improvement plan with a focus at zonal level and close monitoring of progress; maintaining intensified polio eradication efforts with emphasis on closely zonal level surveillance gaps and scale up of community based surveillance; finalization of a polio legacy plan and moving forward with initiating the transition of polio assets; new vaccine introduction (IPV, HPV and the 3rd phase Meningitis A vaccine introduction); implementation of a wide age measles campaign; and strengthening of data management at the national level.

5. Administration and Financial Report

5.1 Human Resources

The WHO EPI work force in 2014 totaled 170, of which 71 (43%) are fixed term staff. There was a surge in operations in 2013-2014 to respond to the outbreak with deployment of a large number of consultants, mostly to Somali Region. 156 (93%) of the staffing are males. 77% of the work force is based at the field level (regional, zonal and woreda level).

Table 10: EPI Staffing, WHO Ethiopia 2014

Contract type	Technical	Administration	Drivers	TOTAL
Fixed term	36	5	30	**71 (43%)**
SSA	20	4	16	**40 (24%)**
Consultants	56	0	0	**56 (33%)**
TOTAL	**112**	**8**	**46**	**167**

5.2 Financial Management

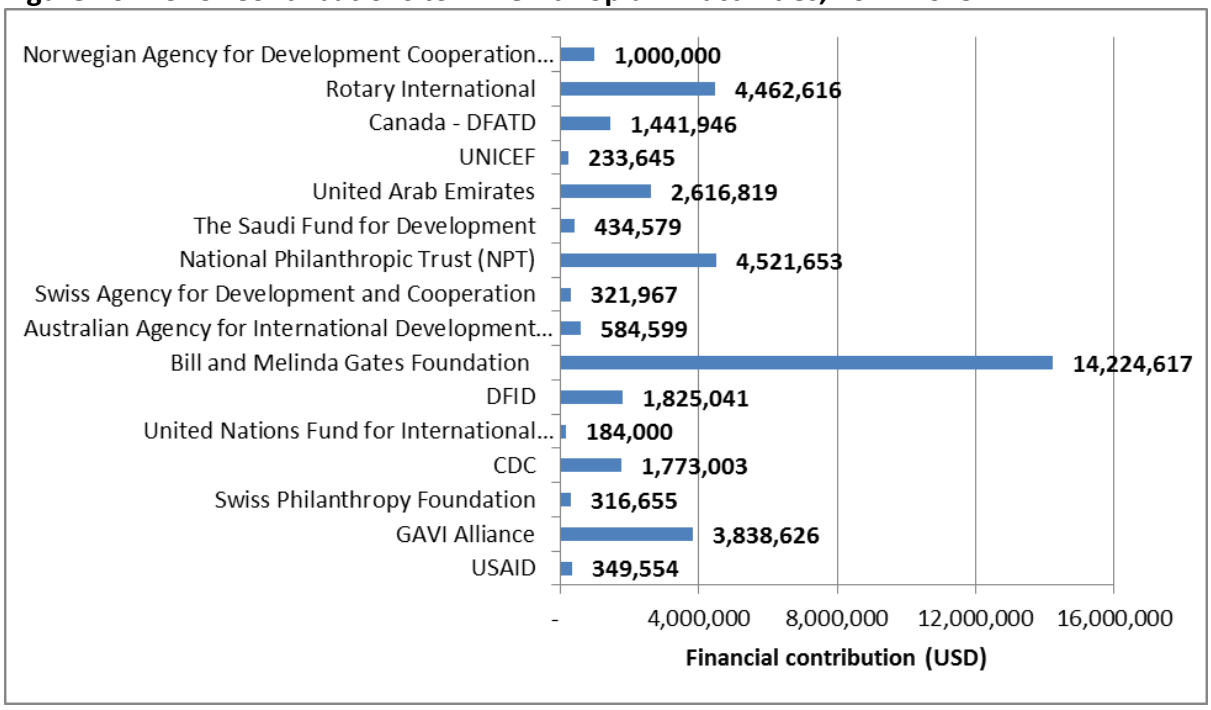
WHO Ethiopia received a total of USD 38,975,971 for program activities. 82% was spent by the end of 2014 and the balance carried forward for overlapping activities in 2015. 78% of funding received was for polio outbreak response activities, as summarized in table 11.

Table 11: Financial summary for EPI activities, WHO Ethiopia, 2014

Area of Work	Funds Received (USD)	Expenditures (USD)	Balance Available (USD)
Polio outbreak response (SIA & Surge)	**30,307,608**	**25,877,373**	**4,430,235**
Polio Surveillance	**3,388,268**	**2,838,587**	**549,681**
Routine EPI	**1,038,509**	**1,017,852**	**20,657**
New vaccine introduction (Men A, Rotavirus)	**3,992,586**	**1,844,685**	**2,147,901**
New vaccines surveillance	**65,000**	**65,000**	**-**
Measles surveillance	**184,000**	**126,010**	**57,990**
TOTAL	**38,975,971**	**31,769,507**	**7,206,464**

Several donor agencies supported WHO activities namely: Bill & Melinda Gates Foundation, GAVI Alliance, DFID, CDC, USAID, Rotary International, Norwegian Agency for Development Cooperation, National Philanthropic Trust, Department of Foreign Affairs, Trade and Development of Canada (DFATD), The Saudi Fund for Development, Swiss Agency for Development and Cooperation, Swiss Philanthropy Foundation, Australian Agency for International Development. The proportion of donor contributions is summarized in Figure 16.

Figure 16: Donor Contributions to WHO Ethiopia EPI activities, 2014-2015



5.3 Operations Support

In response to the polio outbreak and surge in operations, WHO engaged UNOPs as implementing partner in 2013-2014 for human resources management, specifically for administration of consultants' contracts and rental vehicles for the field activities. An agreement was also reached with WFP to support fuel provision for WHO field activities in Somali Region.

Additional local implementing partners supported WHO operations in the field, particularly for the emergency response activities, in view of their comparative presence, capacity and the complexities of the operations: Consortium of Christian Relief and Development Association (CCRDA), Amhara Development Association (ADA) and Ogaden Welfare Development Association (OWDA).

An operations base was established in the polio outbreak zone (Dollo) in Somali Region in collaboration with UNICEF and UNDSS, to facilitate close coordination of the response.

Annexes

Annex 1: EPI International Missions to WCO Ethiopia, 2014

S. No	Purpose	Duration	Participants
1	External Polio Outbreak Assessment Team	12 - 29 January	1. Dr Chiwaya Kwane - WCO Malawi 2. Dr Messeret Eshetu - IST Harare 3. Dr Alex Gasasira - WHO AFRO 4. Dr Christine Lamoureux -WHO HQ 5. Dr Shukla Hemant - WHO HQ 6. Dr Mitula Pamela - WCO Sierra Leone
2	STOP 43	01 Feb - 20 Jun	1. Mr Ahmad Shahvez 2. Dr Sumangala Chaudhury 3. Ms Irene Nekar 4. Ms Allison Connolly 5. Mr Joseph N'Dungu 6. Mrs Olufumilola Adegbite 7. Dr Eduardo Vargas 8. Mr Ejaz Afzal
3	Induction Course for New EPI Team and Partners Retreat - Debrezait	12 - 16 Feb	1. Dr Nestor Shivute - IST 2. Dr Jethro Chakauya - IST 3. Dr Daniel Fussum - IST 4. Dr Messeret Eshetu - IST
4	Support to the WHO-CDC-FMOH START project	31 March - 4 April; September	Steve Stewart, CDC
4	Measles outbreak assessment in SNNPR	March	1. Dr Messeret Eshetu - IST 2. Dr Anthony Kazoka - WHO/Tanzania 3. Jethro Chakauya - IST 4. Ernst Rodolf Kaiser 5. Robert Perry - HQ 6. David Sniadack - CDC 7. Emma Lebo - CDC
5	On-site visit to INRB polio laboratory following 2013 accreditation at EPHI	01 - 09 May	Dr. Ionela Gouandjika
6	International Cross Border Meeting - Jijjiga	21 - 23 May	1. Dr Sam Okiror - HoA 2. Ms Grace Karani - IST *Participants from Somalia and Djibouti*
7	External Polio Outbreak Follow up assessment	9 - 17 June	1. Dr Sam Okiror - HoA 2. Hemant Shukla - WHO 3. Julie Hackett- UNICEF 4. Brigitte Toure - UNICEF 5. Zora Machekanyaga- UNICEF 6. Pierre Grand - WHO 7. Sue Gerber- Gates Foundation 8. Sara Lowther- CDC 9. Victoria Gamino- CDC
8	Administrative and programatic review mission	30 June - 4 July	Ms. Helena O'malley - WHO/AFRO
8	STOP 44	01 Jul - 20 Dec	1. Hope Elizabeth - until 30 Sep 2. Dr Sumangala Chaudhury 3. Ms Irene Nekar 4. Mr David Bakuri Nibaje 5. Mr Joseph N'Dungu 6. Mr David Birdling Zacharia
9	Accreditation review of the and National Measles laboratory (EPHI) and assessment of proposed sub national labs	13 - 17 July	1. Charles Byabamazima - IST 2. Mick Mulders
10	Accreditation review of the and National Polio laboratory (EPHI)	8 - 10 July	Dr Ousmane Diop - WHO HQ
11	Documentation of best practices in polio eradication initiative	24 Sep - 01 Oct	Dr Peter Nsubuga, AFRO Consultant
12	Intussusception surveillance support mission	23 - 26 Sep	Jackie Tate - CDC
13	Supervision mission for MenAfriVac Campaign	09 - 24 Oct	Bita F. Arsene
14	Lot Quality Assurance Survey Training	26 - 28 Aug	1. Dr Sam Okiror - HoA 2. Dr Hamant Shukla - HQ 3. Dr Kabir Shaikh - WHO/Kenya 4. Mr George Gerlong - WHO/Nigeria 5. Mr Samuel Bawa - WHO/Nigeria 6. Mrs Lindiwe Songo - IST *Participants are from Ethiopia, Kenya, Somalia, South Sudan and Uganda*
15	3rd Polio outbreak follow up assesment	17 - 21 Nov	1. Dr Sam Okiror - HoA 2. Hamant Shukla - WHO 3. Sahar Hegazi - UNICEF 4. Brigite Toure - UNICEF 5. Rustam Haydarov - UNICEF 6. Bram Frouws - UNICEF 7. Allen Craig - CDC 8. Bal Ram Bhui - Core Group 9. Endale Beyene - USAID
16	Polio outbreak international consultants	2014	1. Mr. Vance Udoto 2. Mrs Perpetua Kububa 3. Dr. Habibu Yahaya 4. Dr Hassen Sugulleh 5. Dr. Lanre Adeniran
17	Routine Immunization Consultant	July 2014 - Feb 2015	Dr. Augustin Gatera
18	Men A Consultant	August - Dec 2014	Dr. Esther Vitto
19	National EPI Quarterly Review Meeting	8 - 10 Dec	Dr Sam Okiror, IST

Annex 2: International Missions Undertaken by WCO Ethiopia & Government Staff in 2014

S. No	Title of the event	Date	Venue	Participants
1	Annual EPI Managers meeting	10 - 14 Mar	Harare, Zimbabwe	Dr Fiona Braka - WHO Dr Kasahun Mitiku - WHO Dr Teodros Bekele - FMOH Sintayehu Abebe - FMOH
2	WHO AFRO Quarterly internal meeting with polio priority countries	27 - 28 March	Congo, Brazzaville	Dr Pierre M'Pele-Kilebou, WR Dr Fiona Braka - WHO
3	IST/ESA Invasive Bacterial Diseases (IBD) and laboratory data review workshop	01-03 April	Johannesburg, South Africa	Mr Aron Kassahun - WHO, Mr Negga Asamene and Mrs Meseret Assefa from EPHI
4	Vaccine Safety training	27 Apr - 01 May	Accra, Ghana	1. Dr Aysheshem Ademe - WHO 2. Mr Abraham G/Giorgies - WHO 3. Netsanet Berhanu - FMoH 4. Tigist Dires - FMHACA
5	TFI Members Meeting	01 - 02 May	Brazzaville, Congo	Dr Tewabech Bishaw - PHA (TFI Member)
6	Rotavirus Genotyping Workshop	26 May - 06 June	Pretoria, South Africa	Tassew Kassa - EPHI
7	Training of Polio Committees Chairpersons with EPI Focal points in Harare	4-7 August	Harare, Zimbabwe	1. Dr Almaz Abebe - NTF Chair 2. Prof Tilahun - NPEC Chair 3. Prof Bogale Worku - NCC Chair
8	11th Meeting of the Horn of Africa Technical Advisory Group on polio eradication	10 - 15 Aug	Jordan	Dr Fiona Braka
9	Intercountry Workshop to strengthen Countries capacity in monitoring, reporting, investigation and Causality assessment of Adverse Events Following Immunization (AEFI) in the WHO African region	11 - 14 Aug	Tanzania	Dr Kumie Shiferaw Alene - WHO
10	International Polio Cross Border Meeting	27 - 30 Oct	Djibouti	1. Dr Aschalew Teka - WHO 2. Mohammed Ademe - WHO 3. Liya Wondwossen - FMoH 4. Dr Abdifetha Said - Somali RHB 5. Bashir Mohamed - WHO 6. Mohamed Harir -Somali RHB 7. Ziad Nur - Somali RHB 8. Abdulahi Muhyadin - Somali RHB 9. Omar Moelin Ali - Somali RHB 10. Ebrahim Gudale - Benshangul RHB
11	Orientation workshop on Polio Accountability Framework for the Horn of Africa countries	26 - 27 Nov	Kenya	1. Dr Fiona Braka 2. Dr Aregai Woldegebriel 3. Mr Aron Kassahun
12	Capacity Building workshop for quality supplementary immunization actvities for seven countries conducting integrated measles SIAs in 2015 in the ESA sub region	4 - 5 Dec	Zimbabwe, Harare	1. Dr Kathleen Gallagher 2. Mrs Liya Wondwossen - FMoH
13	Technical support for the cVDPV outbreak response	15 - 27 Dec	Juba, South Sudan	1. Dr Aregai Woldegebriel

Annex 3: WHO EPI Organogram