Ethiopia declared a polio outbreak following the detection of a circulating type-2 polio virus case from the Somali Region, Bokh Woreda of Dollo Zone, in May 2019. According to the Ethiopian Public Health Institute (EPHI), the genetic sequencing confirmed that the isolated virus is linked to the ongoing cVDPV2 outbreak detected in the Horn of Africa in 2018, with cases reported in Somalia as well as from an environmental sample in Kenya.

In response to the outbreak, the FMoH, Somali RHB and partners have successfully conducted the Zero round mOPV2 campaign in seven districts of Dollo Zone, targeting more than 191,000 under five children from June 24 to 27, 2019. To support the campaign, two CGPP Secretariat Staff, Dr. Filimona Bisrat, and Mr. Legesse Bezabih, participated during the pre- and intra-campaign activities.

A thorough investigation was conducted by the FMoH with the support of partners to assess the extent of circulation of this strain, identify immunity gaps and support efforts to strengthen surveillance activities. A team of experts from FMOH-EPI, EPHIPHEM, WHO, UNICEF, SCI, TransformHDR, and CGPP with RHB team conducted the outbreak investigation from June 12-17, 2019.
EDITORIAL —

Strong Immunization and Surveillance System: The key to prevent and manage outbreaks

By Filimon Bisrat (MD, MPH), CGPP Ethiopia

The polio eradication programme reached an important milestone with the verification of global eradication of one of the three types of wild polioviruses – wild poliovirus type 2 (WPV2). The last detected case of WPV2 globally was reported from northern India in 1999. In September 2015, the Global Commission for the Certification of Poliomyelitis Eradication (GCC) declared that worldwide eradication of WPV2 had been achieved. However, continued use of live attenuated Sabin type 2 poliovirus contained in the trivalent oral polio vaccine (tOPV) posed an ongoing risk of circulating vaccine-derived poliovirus 2 (cVDPV2) and vaccine-associated paralytic poliomyelitis.

Consequently, in a globally coordinated move in April/May 2016, all 155 countries and territories using tOPV switched to the bivalent oral polio vaccine (bOPV) for routine immunization and supplementary immunization activities (SIAs). In addition, the GPEI decided to include one dose of IPV in the routine immunization program. Surveillance was improved to detect any occurrence of type 2 poliovirus (wild, vaccine-derived or Sabin) in any human or environmental sample.

Since the detection of cVDPV in the Horn of Africa in 2018, Ethiopia had declared the cVDPV2 outbreaks – together with the Ministries of Health of Kenya and Somalia – to be a regional public health emergency and has been participating in regional outbreak responses. On 20th May 2019 a cVDPV2 virus was detected in Bohk District, Dolo Zone, Somali Region, Ethiopia. The genetic sequencing confirms that the isolated virus is linked to the ongoing cVDPV2 outbreak detected in the Horn of Africa in 2018, with the cases reported in Somalia as well as from an environmental sample in Kenya. In response to the cVDPV2 outbreak, the FMoH, Somali RHB and Partners conducted the mOPV2 campaigns from June 24 to 27, 2019 in Dolo and Jarar Zones.

In general, the outbreak response campaign was well coordinated and partners were highly involved. The engagement of high RHB leadership has been witnessed to be very strong this time. Social mobilization was also strong through use of Community Volunteers and Religious Leaders. It was observed that there is a very good coordination between RHBs, WoHOs and partners (UNICEF, WHO and CGPP.) Partners need to continue this coordination for routine immunization. However, the routine immunization program in the region and specifically in Dolo zone is very poor, demanding concerted effort to enhance routine immunization.

Lack of proper cold chain system at the health facilities and the irregularity of conducting immunization program leads to failure to reach the target group with routine immunization and failure to increase population immunity. Without increasing population immunity, it is difficult to stop the transmission of the polio virus. Therefore, Special attention must be given to strengthen the routine immunization system in all regions, particularly in high-risk areas such as Somali region. Strong disease surveillance system should also be in place to detect and report cases. Effective surveillance allows the earliest possible response to outbreaks. Doing so would provide the best path forward to ensuring outbreaks are detected and contained before they can become widespread epidemics.

Reports witnessed that most of the AFP cases were identified and reported by volunteers who are trained and monitored by CGPP. Due to the strong community-based surveillance activities implemented by CGPP, the AFP surveillance performance of the region is good. However, there are still silent areas that are not reporting cases. Therefore, strengthened AFP surveillance must be the major priority for immunization partners, specially the government and NGOs working in bordering high-risk areas.
A case story:

“It is very sad to see my child crippled like this forever.” - Mother of polio victim.

Interview and Report by Dr. Filimona Bisrat and Legesse Kidanne

Narrated by Bethlehem Asgedew

The female index case named Redwan Kedir Adem, is a victim of the recent cVDP2 case identified in Ethiopian Somali Region Bokh District. She is 45-months old and living with her family at Angalo kebele, Laanta Ali Da’ar Village of Bokh Woreda.

Redwan Kedir Adem has four brothers and a sister. Both parents are illiterate and poor. Redwan and her family belong to a typical pastoralist community, wandering from place to place with their cattle in search of water and grazing land. The family resided in the village for the past seven years with short-term movements up to one month to find water. During the visit of the AFP case investigation team to the area, Redwan's mother met with the investigation team. The father was unavailable, visiting his second wife and children in Somaliland.

According to her mother, Redwan and her two brothers received OPV drops two years ago during two SIAs in August and November 2017. The mother said, “All my children got neither routine nor SIA immunization service except for the vaccination that they got during the two campaigns two years ago.” She added:

“I know few things about polio, it is a disease which makes children unable to walk. But I never heard or (was) informed about the immunization services in our area and no vaccinator came to our home, which is why I missed to vaccinate my children.”

Redwan cannot walk due to the pain and residual paralysis in her left leg.

“It is very sad to see my child crippled like this forever. I advise other mothers to vaccinate and protect their children from this disease.”

On the 19th May 2019, Redwan developed high grade fever and was taken to health facilities by her mother on the next days and examined by health workers. When notified about the case, the investigation was started; stool samples were collected and sent for investigation to laboratories in Nairobi and Addis Ababa. All contact stool samples were found to be positive for polio virus type2 and referred for sequencing in National Institute of Communicable Diseases (NICD), South Africa, the Regional Polio reference Lab.

”Protected Together: Vaccines Work!”

The 2019 African Vaccination Week in Ethiopia

From 22 to 28 April 2019, Ethiopia commemorated African Vaccination Week with the theme “Protected Together: Vaccines Work!” emphasizing the power of vaccines in saving lives and keeping everyone healthy.

At the national launching ceremony held at Jigjiga town on the 22nd of April 2019, higher officials from the FMOH, Somali Regional Government, Somali Regional Health Bureau (RHB) and immunization partners attended and delivered speeches.

In her opening speech, Dr. Liya Tadesse, the State Minister of Health, emphasized the importance of collaboration between the government and partners to increase immunization coverage to achieve this sustainable development goal.
The 2019 African Vaccination Week in Ethiopia  

In their speeches, Dr. Yusuf, the SomaliRHB head, and Mr. Aden Farah, Somali Regional State Vice President, also stressed the importance of working together towards improving health sector development.

Dr. Filimona Bisrat, CGPP Secretariat Director, addressed the challenges encountered on immunization service delivery at the border areas and the risks of wild polio virus in those areas. He also stressed that the CGPP will continue its commitment and support to address the hard to reach bordering communities of Ethiopia. Representatives from USAID, WHO, UNICEF and CHAI PATH also made presentations.

All immunization partner stressed the importance of being vigilant in the fight against vaccine-preventable diseases and emphasized the need to move from commitment to action by increasing our efforts and strengthening access to vaccines specially in hard-to-reach areas.

The AVW is an annual event celebrated during the last week of April and aims to promote the use of vaccines and to strengthen immunization programs in the African countries by increasing awareness of the importance and right of every person (particularly children) to be protected from vaccine-preventable diseases.

During the AVW week, various immunization activities such as social mobilization, defaulters tracing and vaccination were conducted.
CGPP conducts mid-year review and planning sessions

The CGPP Secretariat held the CGPP Partners Mid-year Review and Planning Meeting in May 2019 at Adama Town.

The meeting was organized into two rounds. The first round was held from May 6-8 with participants from the Western part of Ethiopia i.e. CRS/BPTCS, EOC, EECMY and IRC from Benishangul Gumuz, Oromia, Gambella and SNNP Regions. The second round from May 13 – 15 was held with partners from Afar and Somali regions i.e. Amref SNNP field office, CRS/HCS,PC and OWDA. Over the course of the meetings, partners discussed their past six months of performance including challenges encountered during implementation and addressed plans for the remaining five months. All partners presented their reports and intensively discussed the program and financial status.

Furthermore, the secretariat provided updates on the CGPP Secretariat progress and global surveillance status; orientations were delivered on: the Global Health Security Agenda (GHSA), Integrated Supportive Supervision (ISS), the implementation of the new reporting system using ODK-ONA and the Care Group Model for behavior change communication.

At the end of the meeting, participants agreed to the execution of action points: proper utilization of the reporting and presentation template; conducting intensive joint supportive supervision; holding discussions with regional health bureaus on how to strengthen monitoring of HDAs; the continuation of establishing/mapping crossing points; the implementation of the new GHSA project; proper utilization and maintenance of vehicles donated by USAID recently; continuation of technical and logistic support for the upcoming SIAs; incorporation of the comments forwarded by the meeting in relation to the coming five months budget and activity plan; preparation of district-level detail activity plan; the sharing of unique experiences; actively reporting AFP cases using the ODK system; strengthening linkages with health facilities by attending review meetings and providing technical support to improve linkage between HDALs and HEWs. A total of 80 participants attended both meetings.

Thank you for your contribution

Your contribution to this newsletter is highly appreciated. Without your valuable contribution, it is hard to reach our audiences with messages that are worth reading. We need to collaborate and exert more efforts together.
Investigation Report of cVDPV2 Outbreak in Bokh Woreda of Dollo Zone, Somali Regional State, Ethiopia

Report prepared by outbreak investigation team comprised of FMOH PHEM, FMOH EPI, regional health bureau, WHO, UNICEF, USAID-THDR, SCI and OWDA.

Background

Recently, cVDPV2 was confirmed from a 45 month female child named Ridwan Kedir Adem, from Angalo kebele, Bokh district Dolo zone of Somali region, who has an onset of paralysis on 20th May 2019. The case was investigated by two adequate samples, tested at Nairobi, Kenya National Medical Research Institute (KEMRI) and turned positive for type-2 polio virus. Following the notification of the isolation of the polio virus, an urgent investigation of the event was conducted on June 12 to 17, 2019 according to the standard operating procedures (SOPs) for polio outbreak response. The objective of the investigation was to assess the extent and related factors for event and generate evidence for immediate action to interrupt possible transmission and further program improvements. The investigation team has comprised of FMOH PHEM, FMOH EPI, regional health bureau, WHO, UNICEF, USAID-THDR, SCI and OWDA.

Geography and Socio-demographic information

Bokh District is one of the 7 districts found in Dollo Zone of Ethiopian Somali Region. The district has estimated total population of 118,277 predominantly pastoralist; in which 20,107 (17%) are children of <5 years. The district has 9 main kebeles and 72 sub kebeles. The boundaries of Bokh district include Galadi and Danot districts in West and Somaliland in the east, southeast and northern parts. The area is semi-arid with limited rainfall. There are poor road infrastructures, inadequate access of safe water supply and lack of telecommunication networks in most of the kebeles.

Laanta Ali Da’ar, the specific village where the case is a rural hard-to-reach area with scattered residents. The village is 5 Kilometers away from Angalo Health Post and Kawane is the closest health center, 50 kilometers away. The victim and her family lived in a typical “Somali traditional house” made of sticks, covered by old cloth tissues and plastic tent.

Investigation Methodology

The team used checklists adapted from the GPEI standard polio outbreak investigation forms and made clinical examinations of case and site observations, document reviews, key informant interviews, focus group discussions, household surveys, office and health facility visits and performance assessment were made for data collection.

Findings

Vaccination History — The child received two OPV doses through SIAs (both are bOPV) conducted in August and October 2017. As routine immunization service is not available in their villages, child didn’t receive routine doses of OPV.

Immunization service availability — There are 22 health facilities (4 functional health centers, and 18 functional health posts) serving the population in the district and only 11 of them are providing Routine Immunization and the rest are not providing routine vaccination services primarily due to the absence of cold chain system. There is a monthly routine immunization report in place but there is no reliable performance data exist, coverage is generally incomplete and difficult to use for analysis.
Routine Immunization (RI) Performance — From observation of RI data of Bokh District filled on EPI monitoring chart, the months (Jul 2018-Mar 2019) penta-1 coverage is 75.3%, Penta-3 coverage 68.2% and measles immunization coverage is 62.4%. With this low coverage, there were high dropout rates of both Penta 1 to Penta 3 (9.5%) and Penta 1 to Measles (17.2%). The routine immunization coverage data from DHIS2 for Bokh district for the EFY2011, 9 months report showed that the figures are by far different from the data retrieved from monitoring chart. The four years trend showed that the immunization coverage for the district is <60% for penta 3 and measles. The trend of the RI coverage for the district showed rapid decline over the last four years.

Polio SIA Coverage — The SIA data could not be found at woreda and zonal levels. Data obtained from the Regional Health Bureau showed that the average SIA coverage of the Woreda was 98%, 97%, 97.5% and 97% in the year 2015, 2016, 2017 and 2019 respectively. No SIA was conducted in the area during 2018. Dollo zone was not included in the 2018 mOPV2 round 1 and 2 SIA campaigns due to the reason that the area was not considered as risk area during that time.

![Fig.2 Bokh Woreda Immunization Coverage (2008—2011 EFY)](image)

Household survey findings — Survey of 30 households with under-five children in Angalo revealed that only 17% of them received at least 3 doses of OPV. Moreover, 20% of the children have never received OPV dose during polio SIA. About 53% of surveyed children never had a routine OPV dose. About 13 (43.3%) children weren’t vaccinated during the last polio SIA conducted on April 2019. Sixteen (53.3%) of children in Angalo weren’t vaccinated during prior to the last polio SIA (January 2019). The admin data indicates that penta3 coverage of the districts is declining rapidly over the last three years and below 20% in this year 2018/2019.

Socio-behavioral information — AFP case detection and reporting by district have been good over the last four years. The families, communities and health workers are aware of poliomyelitis and its reporting procedures. The community is generally sensitive to paralytic diseases and has been automatically notifying such cases regardless of age. Suspected cases were not found during household, community and health facility visits. However, community notified two suspected AFP cases. Samples were also collected from the newly detected AFP cases and from their close contacts. Stool samples were also collected from 20 close contacts of the VDPV case.

Conclusion and Recommendations

In general, as the laboratory results assures the virus is circulating in the area. This indicates an existing weakness in both routine immunization and surveillance systems to reaching every child either through routine or campaigns and in early detecting every suspected case.

Actions are needed to improve access to routine immunization and implement high quality and good coverage polio SIA. These can be made through provision of cold chain equipment at health post level including SDD fridges, proper planning, strict supervisions and follow up, and proper utilization of resources to reach the unreached children. Active case searching should be strengthened by providing support across the border areas and community-based surveillance with strong linkage of local community network and community volunteers.

Make a mapping of clusters of households and identification of social mobilizer (representatives) for each cluster to link up with the HF and to be part of the social mobilization committee is also needed. The team also recommends for rehabilitation (psychosocial, physical and economical) support be provided for the index case and family. Urgent response plan development and campaign should be conducted to stop the transmission of the virus.

Ethiopia launches the 2nd round bOPV campaign

The 2nd round bOPV supplemental immunization campaign has been conducted from April 22-25, 2019 in all Somali & Gambella Regions, and Borena and Bale Zones of Oromia Region targeting <5 children in these areas. CGPP has provided technical support, rental vehicles and social mobilization using the CVs/HDAs. In the three target regions, CGPP has provided technical and logistics supports during the pre, intra and post campaign activities. The following are pictures taken during the campaign at Gambella Region.

Logistic Distribution, Abobo District

Launching Ceremony, Abobo District

Social Mobilization at a church conference, at a village and water points in Abobo and Gambella towns

House to house Vaccination and supervision