Cooperation

As information was received by the country office, the relevant UN and government authorities including IHR focal person and field security officers were informed about the situation.

Coordination mechanisms was established between the Somalia Polio Coordination Room based in Nairobi and the field team through daily teleconferences between the key leadership in UNICEF and WHO. Similar coordination mechanism was established in Mogadishu under the leadership of Ministry of health with coordination meetings taking place every Sunday and Wednesday for National level discussions. Zonal teams who participated in the national level meetings carried out cascade information sharing with the regional and district teams. The Country program also conducted weekly teleconference with the regional offices.

Overall Outbreak Coordinator for MoH: Dr. Abdirahman, Director of Public Health
Overall Outbreak Coordinator for WHO: Dr. Eltayeb, EPI/Polio Coordinator
Overall Outbreak Coordinator for UNICEF: Mr. Lieven, Polio Team Leader
**Somalia Environmental Surveillance**

Environmental surveillance was started in Somalia on 19th September with the support of EMRO & WHO HQ. Initially three sites were selected in Mogadishu in three districts (Waberi, Shangani and Hamarawieni) based on the availability of viable sewage system, population density, population movement, surveillance indicators and vaccination coverages. The second sample collected on 22\(^{nd}\) October from 21October sewage site turned out to be positive for VDPV2 and subsequent sample collected from the same site on 2\(^{nd}\) November also turn positive for VDPV2. A new temporary ES site was established in one of the busy hospitals and frequency of sampling was increased from once month to a weekly bases. The image below shows the environmental sites in Mogadishu.

![Map showing location of environmental sites in Mogadishu, Somalia (Imagery date: 31 October 2017)](image)

The graph below also shows the samples collected so far and the laboratory feedback.

<table>
<thead>
<tr>
<th>Sites (Total=03)</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mogadishu</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>District</td>
<td>Site name</td>
</tr>
<tr>
<td>Banadir</td>
<td>Waberi</td>
<td>21October</td>
</tr>
<tr>
<td>Banadir</td>
<td>Shangani</td>
<td>Urobo</td>
</tr>
<tr>
<td>Banadir</td>
<td>Hamarawieni</td>
<td>Kawma</td>
</tr>
<tr>
<td><strong>New Province /Region</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Egyptian Hospital temporary site</td>
<td></td>
<td>Under process</td>
</tr>
</tbody>
</table>

Legend:
- WPV1
- SL2
- VDPV2
- NPEV
- Under process
- SL1
- SL3
- Mix SL1&SL3
- Negative
- PVZ Undergoing Sequencing
**21October Sewage Site Catchment Area Mapping**

Using historical maps, conducting GIS studies (elevations & contours) of the area and discussion with Mogadishu municipality sewage experts and the local polio team, the catchment area of the 21October ES spot was identified as in the map below;

Filed validation was also conducted through household survey to identify the actual boundaries of the sewage system. A structured questioner was developed, converted to ODK and 40 data collectors were trained (20 team of 2 individuals). Objectives this survey were:

- Collect geo information to know the catchment area of 21October sewage site
- Understand if households drain their west to the main sewage system which is feeding the 21October sewage site
- Assess if there is/are any child in the household/neighborhoods paralyzed in the past 12 months
- see vaccination status of all U-5 children in the HHs against polio checking their vaccination card
- See if there is/are any person who arrived in the past 3 months
- See if there is/are children who is sickly and visits the hospital frequently in the HHs

**Household Survey Findings**

- Data were collected from a total of 888 buildings. Of which, 476 (54%) are households, 234 are empty buildings, 81 are educational institutions and 60 are restaurants and hotels, 13 mosque and 24 other categories

**Next step using the HH survey result**

- Continue to analyze more variables from the survey that was just completed
- Re-visits and investigate the 10 households that reported paralysis in the past 12 months
- Re-visits and investigate the 8 households that reported having sickly child and were linked to the main municipal sewage system draining in to 21October site
- Continue the active case search in the area
- Use this information to enrich the micro-planning process for the upcoming immunization campaigns
• 79 (16%) households reported to have been connected to the main municipal sewage system that is draining to the 21October Sewage site. 347 (69%) HH were using their own Septic tanks while 73 (15%) were using pit latrines.

• Out of 783 children surveyed 635 (81%) had positive response for vaccination (Did this child receive immunization against polio?)

• Out of 783 children surveyed 10 children had been notified in the survey with some sort of paralysis in the last 12 months.

Immunization Response with mOPV2
The Country program proposed to conduct 2 rounds of mOPV2 targeting children under 5 years followed by 1 round of IPV targeting children under 2 years in Banadir, Lower Shabelle and Middle Shabelle regions of Central zone. There will be 2 weeks interval between the two mOPV2 rounds and 2 weeks between the second mOPV2 round and the IPV campaign.

Justification: The current event is reported from Waberi district in Banadir region. Banadir region has 16 districts and this is where the capital city Mogadishu is situated and it is the most densely populated area in Somalia. There are no demarcations between these districts – no one knows where a districts starts or ends. Lower and Middle Shabelle regions, geographically close proximity to Banadir and from studying the trend of previous WPV outbreaks whereby, without exception over 90% (close to 100% in some outbreaks) of all WPVs in central zone were reported from these 3 regions and cases were consistently happening at the same time in these regions. These two regions are along the Shabelle River with people and produce constantly moving into Banadir from these regions.

Implementation: The mOPV2 implementation started on 10th December and will continue for three days. During this immunization campaign 726,699 children under five years of age in all accessible districts of Banadir and Lower and Middle Shabelle regions will be targeted.

Campaign Preparations Activities
- Targeted 726, 699 under 5 children
- Micro-plans prepared, revised and validated at DFA and district level
- Training for RPOs, DPOs and DFAs and data managers on how to use satellite maps to enhance their micro-plans and identify DFA and team areas
- DFA level area digital maps prepared, validated by DPOs and DFAs, and printed 197 digital maps
- One day orientation given for RPOs and DPOs on mOPV vaccine management
- C4D activities started 3 days ahead of campaign day using local radios and SMS, megaphone etc
- Deployed 4400 vaccinators and monitors
- Assigned at least 1 monitor per each DFA areas
- Morning briefing was given for monitors in WHO

mOPV2 cold chain handling and management: The Country received 1.6 million doses of mOPV2 in Mogadishu on 2nd December for the two campaign rounds. Participants from MoH, UNICEF and WHO received a training on mOPV2 handling and management which was conducted on the 5th of Dec with support from
UNICEF HQ, and this training was further cascaded to the regional cold chain managers on 7th Dec. District level trainings were implemented by WHO.

**Stock Management:** The country program decided to withdraw all bOPV from the regional vaccine stores back to Mogadishu before supply of mOPV2 in order not to mix up stock. In Mogadishu vaccine store, mOPV2 was received, vaccine arrival report (VAR) filled and this consignment was kept in a different freezer which was clearly labeled as shown.

For proper accountability, levant regions received from the country office different forms that will be used to compile data in regards to stock movement and mOPV2 utilization. These forms will be filled on a daily basis by store managers & supervisors and all mOPV2 has to be withdrawn and accounted for after the end of the fast round.

**Distribution:** Vaccines to lower and middle shabelle regions were distributed on 7th December while all districts naibouring mogadishu, distribution was done on 9th December a day before the campaign. Currently, the stock remaining in mogadishu cold chain store is for round two and will be distributed at a later date.

**Wastage Management:** At the end of each campaign round,
- All open vials (fully or partially used) will be put in a zip bag and returned to the central vaccine store in Mogadishu.
- All unopened vials will be returned and safely stored until the next planned round separately in the central cold chain store.
- Vaccine Utilization Report (VUR) will be submitted to UNICEF at the end of each mOPV2 round.

The final destruction of mOPV2 will be decided by the out-break response assessment team (OBRA) after all the SIA rounds have been concluded.

**mOPV2 Campaign C4D Updates:** As soon as it was decided to respond to the outbreak, a response communication plan was developed with a detail analysis of data from previous campaigns in order to identify high risk/priority districts.

Given the repetition of polio campaign rounds, a close contact is maintained with stakeholders in general and NIAG members in particular to get their support so as to ensure acceptance of the communities. The C4D Specialist travelled to Mogadishu to support preparatory activities. UNICEF consultant and a Stop Polio consultant are currently in Mogadishu to support the implementation of the 1st round of the response campaign.

IEC materials were developed and adopted with all partners: a Poster, a Banner, a Polio/ADPV Facts sheet and a radio spot. Routine immunization IEC materials on polio is also used to sensitize population.

**POLIO VACCINATION CAMPAIGN FOR CHILDREN 0 TO 5 YEARS**

**THE RISK OF POLIO IS STILL HIGH!**

**LET US VACCINATE ALL OUR CHILDREN TO PROTECT THEM**

World Health Organization

Vaccination is free
A special media briefing was organized in order to sensitize major media professionals (radios and TVs), provide them with appropriate information, give them specific orientations and mostly formulate the expectations of the MoH in regards to sensitization of populations.

It is important to note that a social investigation was carried out amongst leaders and families in communities around the site where the environmental sample was collected. Data is currently being analyzed.

In order to minimize refusals and non-compliance, an advocacy meeting was planned in each of the district with high level of refusals according to the IM data of previous campaigns.

Regional and district social mobilization coordinators (RSMCs and DSMCs) were trained in Mogadishu as trainers on 4th December 2017. Community mobilizers were trained by RSMCs and DSMCs in their respective districts on 6th December 2017. Community mobilizers in all district were deployed on 8th December 2017 for house to house sensitization with data collection, and would work until the end of the campaign.

**Day-1 of mOPV2 Response Campaign**

**Banadir Region:** A total of 436,804 under five children are targeted in 16 districts. Except 1 district, which is Waberi, the campaign was started as planned in all the 15 districts. The campaign was only delayed for one day in Waberi district due to issues with the local government which is resolved. This district joined the rest on day-2. A total of 879 teams deployed one day-1 in all the other districts and were working smoothly. C4D activities are going using local media. 80 intra-campaign monitors are also deployed to supervise the daily vaccination activities which is 2-3 DFA areas per monitor. Monitors were composed from MOH, WHO, UNICEF and local universities. No security issue reported

**Lower Shabelle:** A total of 182,368 under five children targeted from 6 districts (Wanlweyn, Qoryoley, Afgoe, Marka, Kuntuwarey and Barava) were targeted. While Wanlawayn and Afgoe are fully accessible, Qoryoley, Marka, Kuntuwarey and Barava are partially accessible. A total of 514 teams deployed. C4D activities are going mainly using microphone mounted on and house to house team mobilization. No security problem encountered

**Middle Shabelle:** In Middle Shabelle 120,248 under five Children were targeted. As planned in middle we have planned to conduct mOPV 6 districts (Jowhar, Mahaday, Cadale, Warsheik, Balad and Rage cell), all are accessible except Adale which is partially accessible. Number of teams present in work are 351 teams no absent teams during the campaign, and 91 supervisors deployed in 91 DFA areas to monitor campaign. C4D activities is done smoothly mainly using microphone mounted on cars, mobilizing as house to house and mosques. No security issue reported.

**Intra-campaign Monitoring:** In total 290 monitors were deployed in 415 DFA areas in the three regions. A total of 80 monitors deployed across 197 DAF areas in Bandar. Their report shows 985 HHs were visited and 97% (n=2178/2216) children physically seen by the monitors had their fingers marked. This report is only based on 72/197 DFA areas or (46/73) monitors.
Surveillance activities
AFP surveillance is heightened and active case search of AFP cases in the community and health facilities has continued. Since 1st of November 2017, a total of 11 AFP cases, 33 contacts, 57 community samples and 24 Environmental samples were collated from Central zone and sent to the KEMRI lab. The table below shows samples collected from Banadir region.

<table>
<thead>
<tr>
<th>Sample Type</th>
<th>Total Samples</th>
<th>Discarded</th>
<th>Pending</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFP Cases</td>
<td>5</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Contacts of AFP</td>
<td>15</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Community Samples</td>
<td>57</td>
<td>49</td>
<td>8</td>
</tr>
<tr>
<td>Environment</td>
<td>15</td>
<td>3</td>
<td>12</td>
</tr>
</tbody>
</table>

As part of the surveillance review, a joint visit was conducted in selected public and private HFs to see the AFP surveillance activity and also sensitize the health workers about the event. Review of surveillance and immunization services among special population in Mogadishu (IDPs etc.) was also conducted. Healthy children stool samples were collected from randomly selected households in Waberi district (25) as well as from health facilities with pediatric outpatient (24). The 8 additional community samples were collected from children who were reported as being sickly and have their household drainage linked to the main sewage system according to the H2H survey result. Investigations is ongoing with possible collection of additional 10 samples from HHS who gave positive response for the question "Was there any child with paralysis in this household for the past 12 months?" during the H2H survey in the 21October catchment area. Surveillance indicators for the national, zonal, regional and district level indicators of the affected area are above international standards for all indicators except for Enterovirus and SL isolations. In the graphs on the side and below we present this indicators.

<table>
<thead>
<tr>
<th>Indicators/Year</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017*</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of AFP cases reported</td>
<td>54</td>
<td>275</td>
<td>189</td>
<td>110</td>
<td>113</td>
<td>132</td>
</tr>
<tr>
<td>NP -AFP rate</td>
<td>2.2</td>
<td>10.7</td>
<td>7.2</td>
<td>4.1</td>
<td>4.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Stool adequacy</td>
<td>100%</td>
<td>82%</td>
<td>100%</td>
<td>98%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>% Notification within 7days</td>
<td>91%</td>
<td>65%</td>
<td>85%</td>
<td>83%</td>
<td>96%</td>
<td>100%</td>
</tr>
<tr>
<td>% Investigated within 48 hrs</td>
<td>98%</td>
<td>99%</td>
<td>98%</td>
<td>98%</td>
<td>99%</td>
<td>99%</td>
</tr>
<tr>
<td>% of NP-EV isolated</td>
<td>20%</td>
<td>5%</td>
<td>10%</td>
<td>11%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>% of SL isolated</td>
<td>6%</td>
<td>10%</td>
<td>5%</td>
<td>3%</td>
<td>11%</td>
<td>6%</td>
</tr>
<tr>
<td>% stool in Good Condition</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

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