The polio programme is working with governments and health authorities to plan and implement outbreak response activities for circulating vaccine-derived poliovirus outbreaks in Sudan (cVDPV2) and Yemen (cVDPV1).

In Sudan, a total of 23 children have been paralyzed by cVDPV2 across 11 states. The most recent date of onset of paralysis in Sudan is 18 August 2020. Environmental surveillance has confirmed the presence of the virus in eight samples from sites in Khartoum. The last date of collection was 9 August 2020.

In Yemen, a total of 15 children have been paralyzed by cVDPV1. Sa’adah Governorate is the epicentre of the outbreak. The most recent case has onset of paralysis on 5 June 2020. However, clusters of AFP cases have been reported in the northern governorates of Al Jawf, Al Mahaweet and Amran, these cases are under investigation.

Vaccines have now arrived in both countries ahead of their respective immunization activities in response to the outbreaks.

**Range of onset of paralysis**

<table>
<thead>
<tr>
<th></th>
<th>Sudan</th>
<th>Yemen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index case</td>
<td>7 March 2020</td>
<td>18 June 2019*</td>
</tr>
<tr>
<td>Most recent case</td>
<td>18 August 2020</td>
<td>5 June 2020</td>
</tr>
</tbody>
</table>

*Interruptions to stool shipment from Yemen to the lab led to delayed detection of the outbreak in 2020.

**Gender distribution of cases**

- **Sudan**
  - Female: 57%
  - Male: 43%

- **Yemen**
  - Female: 47%
  - Male: 53%
Both Sudan and Yemen are considered as Very High Risk / Outbreak Countries according to the regional risk assessment framework. AFP surveillance data analysis demonstrates that there is uneven population immunity in Sudan and growing numbers of under-immunized children in Yemen. Data from Sa’adah Governorate, the sole governorate reporting cases in Yemen, indicates more than half of children have received no OPV doses each year since 2018. Access to all children in both countries for varied reasons remains a key challenge and is compounded by the COVID-19 pandemic.

Surveillance:
• Efforts to accelerate and intensify surveillance for more rapid detection of the virus are underway in both Sudan and Yemen.
• In Sudan:
  • Field and laboratory surveillance teams are fast tracking an expansion to the environmental surveillance network. The programme is exploring the feasibility of expansion into six prioritized states (Dafur: West, East, North; Red Sea, Gezira and White Nile).
  • AFP surveillance training and sensitization sessions are being conducted in 14 of 18 states, targeting surveillance staff, health workers and traditional healers.
  • Cross-border coordination is being intensified as cVDPV2 outbreaks expand geographically in the African continent. Genetic analysis of viruses detected recently in South Sudan confirm a link between the viruses present in Sudan and Chad. This virus is also connected to outbreaks of cVDPV2 in Cameroon and Central African Republic.
• In Yemen:
  • The AFP surveillance system has detected clusters of AFP cases in Al Jawf, Al Mahaweet and Amran governorates, these cases are under investigation.
  • Intensified efforts for community-based surveillance are underway in Sa’adah, Hajjah and Amran governorates. Surveillance focal points are maintaining close follow up on all reported AFP cases.
  • Longstanding delays with the shipment of stool specimens out of the country is contributing to further delayed detection of the virus. Currently more than 700 stool specimens are awaiting shipment out of Yemen.
  • The priority is to clear the backlog of samples. Options include establishing a direct detection lab in Sana’a while continuing with efforts to ship specimens out of country to the WHO accredited laboratory for polioviruses.
  • The programme is further exploring the feasibility of establishing environmental sampling as part of enhanced surveillance activities.

Health and Humanitarian Context:
• Insecurity, inaccessibility and weakened health systems continue to hamper efforts to reach every child with important essential services.
• Both Yemen and Sudan are experiencing significant currency depreciation against the dollar, resulting in exacerbated humanitarian need, and rising prices for basic commodities such as food, medication and fuel. The depreciations also have implications for campaign costing. On 10 September, Sudan announced an economic state of emergency.
• More than 826,300 people are affected by severe flooding across Sudan’s 18 states, with at least 74,654 homes destroyed. Hygiene and sanitary levels have plummeted due to flooded drainage systems and contaminated water supplies, raising the likelihood of disease spread. (source: OCHA, 22 September 2020)
• In Yemen, health partners are working to improve the COVID-19 response. The official epi curve is unlikely to be representative of the full extent of transmission. Health partners continue to support the response to outbreaks of measles and cholera.
• Widespread population movements of nomadic, IDP and rural groups further compound the challenges the programme faces in reaching every child.

REGIONAL RISK ASSESSMENT
• Both Sudan and Yemen are considered as Very High Risk / Outbreak Countries according to the regional risk assessment framework.
• AFP surveillance data analysis demonstrates that there is uneven population immunity in Sudan and growing numbers of under-immunized children in Yemen. Data from Sa’adah Governorate, the sole governorate reporting cases in Yemen, indicates more than half of children have received no OPV doses each year since 2018.
• Access to all children in both countries for varied reasons remains a key challenge and is compounded by the COVID-19 pandemic.

Regional coordination:
• The Regional Outbreak Management Group (WHO/UNICEF) continues to coordinate through daily and weekly interactions with the aim of expediting support to Yemen and Sudan outbreaks.
• International and national surge support to both outbreaks is ongoing. Focus is on building capacity for lab, cold chain, logistic and vaccine management, surveillance, C4D and communications.
  • UNICEF has deployed members of the global rapid response teams for C4D and the members of their regional team to support Sudan outbreak response preparations.
  • WHO has pivoted its staff to provide intensified support to both Sudan and Yemen in resource mobilization, external communication, surveillance and incident management.
• Polio eradication teams continue to support the COVID-19 response across the region, particularly in the areas of surveillance (field and laboratory), analytics and communications and coordination.
**Vaccine logistics:**
- **Sudan** has secured nearly 10m doses of monovalent oral polio vaccine type 2 (mOPV2) for the first round of the response. Vaccines arrived in country on 1 October. [Read more]
- The Standard Operational Procedures and forms for vaccine handling, reverse cold chain, supervision, spot check activities and destruction were reviewed by Sudan’s technical committee and aligned with the global guidelines. The accountability framework has been finalized and communicated with all levels. Training material is under review.
- A delayed shipment of 2.3 million doses of bOPV for routine immunization and outbreak response has arrived in Yemen (on 6 October) during a window in which the airport was reopened for humanitarian access.
- UNICEF is providing intensified support for cold chain logistics and vaccine management in Yemen to ensure country preparedness for outbreak response activities.

**Case Response Preparedness and Implementation update**
- Integrated outreach and Health Camps covering Integrated Management of Childhood Illness (IMCI), Maternal and Neonatal Health (MNH) and polio vaccinations are planned in Yemen’s Sa’adah governorate, in October, November, December 2020 and January 2021.
- The first round of the targeted bOPV campaigns to reach children under five years of age in the high-risk governorates of Amran, Aljawf and Hajjah (neighbouring Sa’adah) has been delayed due to issues with vaccine arrival. The programme continues to plan for a series of targeted bOPV vaccination activities to cover the northern governorates except Sa’adah and one national immunization campaign.
- The first of two nationwide vaccination campaigns in response to the outbreak in Sudan has been delayed due to country preparedness. The campaign is now planned for October 26.

**Risk Communication and Community Engagement**
- In Yemen, social communication microplans for Amran and Hajjah governorates are under preparation.
- Planning for a series of rapid assessments is under discussion with partners at the field level.
- UNICEF is working with local authorities in Yemen to agree on key social mobilization and communication activities to be conducted ahead of any outbreak response activities.
- In Sudan, rapid assessments focused on community perceptions, sources of information and networks have been completed in nine states. The results have been analyzed and will be used to inform the development of polio outbreak response communication activities.
- Recruitment for social mobilization is ongoing across all states of Sudan. Training of social mobilisers is planned for early October starting with a Training of Trainers (TOT) at the state level with further cascading at the locality level.
- UNICEF will partner with the Sudanese Red Crescent society to facilitate social mobilization and communication activities in hard-to-reach and under-served communities.

**cVDPV2 outbreaks in the EMR:**
- The polio programme continues to respond to genetically linked cVDPV2 outbreaks affecting Afghanistan and Pakistan which began in 2019 and a protracted outbreak of cVDPV2 in Somalia, which was initially detected in late 2017.
- The first of two house-to-house case response campaigns has concluded in Somalia’s south and central regions. Teams aimed to reach 1.65 million children aged under five years with mOPV2. For more on Somalia outbreak response – click here for the latest polio update.
- Both Afghanistan and Pakistan are planning to implement synchronized vaccination activities with tOPV in October to address ongoing circulation of WPV1 and cVDPV2.
- Teams across the Region continue to adjust tactics in the context of COVID-19, to ensure all operational outbreak response is planned and executed with the highest safety measures.

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Almost 10 million doses of mOPV2 arrived to Khartoum ahead of the first vaccination campaign in response to the outbreak. UNICEF/Sudan.
Relevant links:

- Global Polio Eradication Initiative (GPEI) website, updated weekly
- WATCH: Vaccine-derived polioviruses animation | Responding to an outbreak of VDPV video
- GPEI factsheet—VDPV
- What is vaccine-derived polio?
- Or visit the Global Polio Eradication Initiative website for more information.

Please direct comments and questions to:

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UNICEF | Regional Polio Coordinator: father@unicef.org / Regional Chief of Communications: jtaouma@unicef.org