Yemen: Cholera & Diphtheria Response
Emergency Operations Center
Situation Report No. 17
Week 50 (11-17 December 2017)

Cholera Situation Update:

The cumulative total of suspected cholera cases reported since 27th April 2017, reached 994,751 as of 21 December 2017, with 2,226 associated deaths reported across the country, the overall case fatality rate is 0.22%. Children under the age of 5 years represent 28% of the cases. People over the age of 60 continue to account for the highest percentage of deaths 31.16%. 22 out of 23 governorates are affected representing 96%. 92% percent of districts are affected, 305 out of 333 districts in-country. The national attack rate continues to increase reporting 361.19 per 10,000. The five governorates with the highest cumulative attack rates per 10,000 are Amran, Al Mahwit, Al Dhale’e, Abyan and Hajja. So far, 1069 cases were confirmed by laboratory testing. As of week (50), there were 7,762 suspected cases reported and 1 associated deaths with 10% of the cases reported severe. Use of rapid diagnostic test has increased since week 40, 615 RDTs were conducted in week 50 with 99 positive RDTs.

Though the reported numbers for suspected cases of cholera are decreasing, the event is still being closely monitored, paying close attention to surges in numbers particularly when the rainy season begins. As the MoPHP continues to lead, in close collaboration with WHO and partners, the support of dehydration treatment centres all over the country still continues, as well as support to strengthening laboratory sampling and diagnostics (i.e. collection of stool samples for lab testing, transporting samples to lab and provision of operational costs), and availability of supplies and reagents. Disease surveillance as well as detection and treatment activities are still ongoing.
Health Cluster partners are operating 4666 Diarrhoea Treatment Centre (DTC) beds in 252 DTCs besides 1032 Oral Rehydration Points (ORPs) in 20 Governorates and 232 affected districts in Yemen. This is compared to 4151 beds in 226 DTCs and 946 ORPs of the week before.

As of last week, 230 cholera treatment facilities with 1235 beds were closed of which, 49 DTCs and 181 ORPs. The closed facilities are in Hajjah (63), Taiz (33), Amran (35), Sana'a (16), Al Hudayda (19) and Dhammar (26). Still some partners plan to set up 110 ORPs, 11 DTCs with 79 beds capacity in total.

Health cluster has discussed and developed recommendations for integrating cholera treatment facilities into health system in Yemen. The 16 recommendations developed covered ORPs, DTCs and funding for cholera and aims at best utilization of cholera resources. Such recommendation would also support and considered as a good start for preparedness for a new wave of cholera.

Health cluster planned with other clusters under ICCM to conduct a workshop in December 2017 to identify lessons learnt from the cholera epidemic and better prepare for a new wave if it happens. Due to current security situations in Yemen, the workshop is postponed till further notice. Furthermore, 39 health partners submitted their CTC and /ORP data in week 50. These partners are ACF, ADO, ADRA, KDH, BFD, CSSW, ENHADH, FMF, GHO, HCR, Hope, Human Appeal, IMC, INTERSOS, IOM, IRC, Islamic Relief Yemen, IYC, LFD, MC, MdM, Mercy Corps, NFDHR, NLSD, 2 Observers, PU-AMI, Relief International, SAWT, SCI,, SOUL, Taybah, TYF, UNICEF, WHO, VHI, YAD, YFCA, YRC, YWU
WASH Cluster Response: cholera

WASH Cluster partners are reporting cholera response activities in 20 governorates in 184 districts throughout the reporting period. Project owners reporting are ARD, CARE, IMC, IRC, LFD, MSF-CH, NFDRH, OXFAM, RI, SFD, UNICEF, VHI, WHO, YDRD, and YFCA. Implementing partners are BFD, GWQ, Hemmat Shabab, NFDRH, NMO, SOUL, TFD, and YFDR. Partners are working closely with local authorities including GARWSP EU, NWRA, LWCs, GHOs and DHOs, HEC and community volunteer networks.

WASH activities: These continue to be a critical component in the prevention, control and response to suspected cholera cases in-country. Access to clean water still remains an important issue, as chlorination and water trucking remain ongoing. In the reporting period, an estimated total of 7,600 people benefitted from chlorination of water supplies (communal water tanks) in 2 districts in Hajjah and Raymah. Activities for this reporting period are as follows:

- Chlorine provision for disinfection of water supply networks continued in 58 districts in 13 governorates, with an estimated 3.6 million people connected to these networks.
- Monitoring of free residual chlorine is ongoing in 13 districts in Amanat Al Asimah, and Sana’a. Chlorination of private water trucks is continuing in Al Ma’aper district in Taiz governorate.
- More than 240,000 people received safe water through water trucking in 27 districts in 8 governorates.
- More than 12,000 people have received chlorine tablets for household water treatment in 12 districts in 4 governorates. Furthermore, water storage container disinfection campaigns are ongoing in 7 districts in Aden, and Taiz.
- Waste water treatment plants are supported in Aden, Hodeidah and Amanat Al Asimah, Dhamar and Hajjah with approximately 3.3 million people connected. Also, ORPs and DTCs are supported with water trucking in 2 districts in Taiz governorate. Partners provided handwashing facilities in DTCs in 1 district in Hajjah.

Emergency risk communication activities:

- Moreover, an estimated total of 773,000 people was reached by partners with cholera key messages through household visits, and community and school events in 144 districts in 19 governorates.
- WASH partners reached over 170,000 people with basic or consumable hygiene kits in 19 districts in 7 governorates. Support to cleaning campaigns is ongoing in 14 districts in 3 governorates as part of community outreach activities.
Limited WASH supplies and stretched resources:

- WASH supplies such as household water treatment tablets and soap are of limited availability in the local market.
- The cholera response of WASH partners is competing with other WASH emergency response priorities, such as the provision of clean water and sanitation for displaced populations and the response to malnutrition.

Limited access to affected communities/security and entry visa issues:

- Some WASH partners are facing challenges in accessing the most-affected communities due to security risks or because of bureaucratic impediments.
- Visa constraints continue to hinder some experts from coming into the country.
- Escalation of violence in Yemen affects many areas, limiting further access of health partners to provide health services to Yemeni people.
- Blockage of borders and the halt of delivery of humanitarian aid into Yemen has devastating effects on the response to cholera in country with probable lack of medical supplies needed to respond to the epidemic in the coming weeks.
- Currently the health cluster has enough medical supplies to response to the epidemic for 6-8 weeks, lack of medical supplies could result in a higher CFR—which is currently around 0.22% as of 22 Dec 2017, with more potentially associated deaths from cholera (note: that all recorded cases are currently suspected cholera cases as reflected in EWARS).

Health systems and reporting issues:

- The health system has been weakened by the ongoing conflict. More than 55% of all facilities either closed or partially functioning. WATSAN systems are disrupted and continued funding is required for the operation and maintenance of these system, critical to outbreak control.
- Misreporting of suspected cholera cases in many health facilities accounts for a misleading increased case load observed in some governorates and districts. There is a lack of capacity and resources of some partners to conduct regular supervisory visits to DTCs and ORPs. Health partners need some time to adjust their projects to the new endorsed modality of work for health partners in health facilities.
- Collecting stool samples for laboratory testing, transporting the samples to laboratory and provision of operational cost, and availability of supplies and reagents.
Diphtheria Situation Update:

As per the diphtheria report dated 20 December from the MoPHP, the suspected diphtheria cases are 333, including 35 associated deaths—the outbreak is currently affecting 18 governorates. As of week 50—the vast majority of cases were reported from Ibb governorates (57%) specifically from (Assadah, Yareem and Rural Ibb districts), followed by Al Hudaydah (11 %), Aden (7%) and Dhamar (6%). Most of deaths cases were reported from Ibb (12 deaths) followed by Al Hudaydah (8 deaths), 3 deaths from Amran and Dhamar (2), Abyan (2) Aden (2), Taiz (2) and Hajjah (2), Aljawf (1) and, Sa'adah (1). Also, children under the age of 5 account for 19% of cases and 40 % of deaths. Reported cases have made the first peak on week 38 (21 cases) and on week 44 (28 cases) onwards continued with more or less 20 cases, but started a sharp increase on week 48 (51 cases) followed by a decline to 38 cases on week 49.

More than half of health facilities in Yemen have stopped working. There are now 189 cases of diphtheria and nearly 1 million cases of suspected acute watery diarrhea/cholera. Photo: WHO
Response to Diphtheria Outbreak continues during week 50. EPI task force meetings were conducted, daily reporting of the cases. WHO has sent a mission to Ibb, including specimen collection, lab training/testing and RRTs training. A total of 65 DRRTs and 23 GRRTs were deployed.

Diphtheria response planning:

- On 17 December, MoPHP in a meeting with WHO, MSF and UNICEF presented their proposed National Framework Plan for Diphtheria Outbreak and Response outlining an ‘integrated response approach” and strengthened coordination with its response partners, building off of lessons learned from the cholera response.

- This proposed framework is meant to unify response in the context of all infectious disease outbreaks, including Diphtheria, focusing on overall health systems strengthening for all hazards—to avoid the fragmented approach employed during the cholera response. The national framework focuses on 7 overarching components:
  - Coordination Strengthening
  - Surveillance Strengthening
  - Lab support and Strengthening
  - Clinical case management Strengthening
  - Immunization
  - Outreach activities at schools
  - Health education/ Health promotion activities
Diphtheria Response

WHO and Health partners’ response

- There is agreement that overall systems strengthening needs to happen, however, given that the control opportunity to contain the Diphtheria outbreak is still wide, a diphtheria implementation plan, which builds off of the abovementioned framework from the MoPHP is currently being finalized.

- **Medium-term response planning:** In support of the MoPHP’s framework for action, WHO development of a logical framework based on the EOC structure that can compliment the MoPHP response framework, is awaiting agreement from the MoPHP. Vulnerability mapping has been conducted, input of which will be included in the logical framework. The development of the logical framework is the roadmap for response and it contains:
  - Early detection (early warning systems)
  - Clinical case management
  - Contact tracing management
  - Health Logistics
  - Coordination
  - Education and risk communication

- **Immediate:** The week of 17th Dec MSF recently opened 3 diphtheria treatment units:
  - **Severe case management:** Jiblah hospital can treat severe cases and patients can be referred here since it has 1 dedicated ICU and will be building another ICU soon.
  - **Simple/moderate case management:** Naser and Yareem General Hospitals are units that can administer diphtheria anti-toxins.

- To ensure that patients come to these treatment units more needs to be done in terms of:
  - **Referral system strengthening:** There needs to be strengthening of referral system, which could “catch” the patient and bring them to the units
  - **Training of RRTs:** Proper and immediate training is needed and catch the patient and bring to unit. The focus of training would be on: surveillance, case management, contact tracing and case referral.
  - There should also be a focus on investing in the RRTs—diphtheria isolation units cannot be set-up overnight, so the immediate plan should be to use what is already in place—like the MSF treatment centers and RRT capacity support.
Diphtheria Response

- **Health promotion/Risk communication:**
  - People in the affected communities should know that this service/treatment and the cost of transportation to these health units is free of charge.
  - Strong messaging must be developed to meet this need and an effective dissemination mechanism discussed to ensure uptake in communities (i.e. messages should be achievable and encourage positive behavior change)
  - WHO, MoPHP and UNICEF working together to develop messages to ensure patients come to treatment units—messages will directly address rumors circulating in communities that can encourage vaccine hesitancy, also ensure that communities have the capacity to adhere to the public health messages disseminated.
  - Pre-campaign social mobilization activities have been initiated jointly by WHO and UNICEF in close coordination with MOH- health education department

- **WHO specific response actions:**
  - **Training:** Lab training conducted by WHO in Jiblah Hospital
    - **Essential medicines:** 200 000 USD worth of drugs (anti-biotics) for use of RRTs in treating patients have distributed, with 150 000 USD worth procured again. Also, 2nd batch of 1000 DAT doses procured, in addition to 1000 DAT doses already in-country
  - **Materials:** Yareem general hospital supplied with fuel, water, oxygen, equipment and drugs (this is an inter-district hospital)
    - Critical equipment for ICUs already procured and transport being arranged
    - Lab reagent procured
    - WHO has transport media (as of 16 dec 2017) —need MOPHP confirmation to have it done internationally
  - **HCWs incentives:** WHO ensured that RRTS at district and governorate levels have been paid, and incentives received
  - **Support to MSF diphtheria treatment units:** WHO reiterated support to MSF diphtheria treatment units in the form of equipment, procurement of which is already in the pipeline, MSF will revert back on what else is needed:
    - Micro infusion pumps
    - Ventilators
    - Monitors
    - Pulse oximeter.
  - **Vaccination:**
    - UNICEF has brought in vaccines for Anti-diphtheria campaign that comprises of 2.5 million doses of Penta and 3 million doses of Td.
    - MoPHP has decided to vaccinate all the children from 6 months to 7 years with Penta and more than 7 with Td.
Challenges and Concerns: Diphtheria

- **Strengthening of clinical case management:**
  The last major outbreak of diphtheria was in 1982, therefore in terms of clinical case management of the disease and recent clinical experience with Diphtheria in the country must be strengthened.

- **Low immunization coverage in affected areas:**
  Also, the low vaccination coverage in affected areas can be challenging for health care workers (HCWs), in terms of both clinical management and laboratory diagnosis.

- **Blockade hindered health systems/medicines delivery:**
  The provision of diphtheria vaccines and anti-serum, and laboratory supplies were delayed due to the recent blockade.
  - Deteriorating security situation due to armed clashes in Sana’a and other Governorates.
  - Dysfunctional health system and limited access to healthcare facilities.

- **Global outbreak of Diphtheria:**
  Yemen is currently not the only country experiencing a diphtheria outbreak--countries like Bangladesh and Venezuela are also suffering from major outbreaks, leading to difficulties in the timely availability of Penta and Td vaccine, as well as medications and medical supplies.

- **Surveillance system strengthening:**
  Reporting challenges particularly in terms of data discrepancies/incompleteness and lack of timely recording and reporting.
  - Lack of mechanisms for verification and triangulation
  - Weak preventable disease surveillance systems

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