Yemen
لاستجابة للكوليرا
Cholera Response

Electronic Disease Early Warning System (eDEWS)

Weekly Epidemiological Bulletin
W35 2017 (Aug 28-Sep 03)

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Highlights

Country and Governorate level (cumulative)
- The cumulative total from 27 April 2017 to 3 September 2017 is 612,009 suspected cases and 2,047 associated deaths (CFR 0.33).
- 25,883 suspected cases and 11 associated deaths were reported in W35.
- The national attack rate is 215 per 10,000. The five governorates with the highest cumulative attack rates per 10,000 remain Amran (540), Al Mahwit (504), Al Dhale'e (482), Abyan (388) and Hajjah (288).
- Children under 5 years old represent 24% of total suspected cases.
- In total, 11,414 rapid diagnostic tests (RDT) have been performed which represents 18.7% coverage. The coverage for culture is 16.9%.

District level (W32-W34)
- Due to localised increases in the number of cases in certain districts, an increase has been observed in the overall number of cases at country level between W32 and W34 (figures for W35 are still not complete).
- The increase in suspected cholera cases from W32 to W34 has been reported in seven governorates: Al-Hudaydah, Al Jawf, Al Mahwit, Ibb, Dhamar, Al Bayda and Aden.
- The most concerning increases have been reported in Al Hudaydah, Ibb and Aden governorates, and are particularly localised in the following districts:
  - **Al Hudaydah**: Bajil, Al Khawkhah, Zabid, Ar Marawi‘ah and Az Zaydiyah;
  - **Ibb**: Al Qafr, Al Makhadir, Yarim, Ar Radnah, An Nadirah;
  - **Aden**: Dar Sad, Attawahi.

Conclusions and actions taken
- WHO is on full alert and is following the evolution of the outbreak each day in close collaboration with local health authorities.
- Initial investigations began on 31 August. A key objective is to determine whether the numbers are accurate and whether the increase in suspected cases is, in fact, caused by cholera, another diarrhoeal disease, or another reason.
- Three teams of international medical experts and epidemiologists are conducting investigations in Aden, Al-Hudaydah and Ibb governorates.
- These teams are traveling out to the worst-affected districts in these three governorates, visiting local health authorities and health facilities to determine the reason for this sudden escalation in suspected cases.
A. Cholera Response | Cumulative figures from 27/04/2017 to 3/9/2017

<table>
<thead>
<tr>
<th>612,009</th>
<th>2,047</th>
<th>0.33%</th>
<th>96%</th>
<th>90%</th>
</tr>
</thead>
</table>
| حالات الاشتباه
Suspected cases | الوفيات
Associated deaths | معدل الامام بين الحالات
Case Fatality Rate | المحافظات المتأثرة
Governorates affected | المديريات المتأثرة
Districts affected |
| 25,883 حالات وفاة في
الأسبوع الحالي
11 وفاة في
الأسبوع الحالي | | | | |
| 25,883 حالات اشتباه
في
الأسبوع الحالي |

B. المحنى الوبائي Epidemic curve

الشكل (1) المحنى الوبائي على المستوى الوطني

Figure 1 | Epidemic curve (Country)

الشكل (2 أ) حالات الكوليرا على مستوى الجنس
Figure 2a Cases by sex (Cumul.)

الشكل (2 ب) حالات الكوليرا على مستوى العمر
Figure 2b Cases by age (Cumul.)

الشكل (2 ج) حالات الكوليرا بالنسبة لحالة المرض
Figure 2c Cases by outcome (Cumul.)

- **612,009** حالات الاشتباه
- **2,047** الوفيات
- **0.33%** معدل الامام بين الحالات
- **96%** المحافظات المتأثرة
- **90%** المديريات المتأثرة

**Summary indicators**

- **Cases by sex (Cumul.):**
  - **Male (49%; n = 306,176)**
  - **Female (51%; n = 316,574)**

- **Cases by age (Cumul.):**
  - **< 5 (24.3%; n = 144,281)**
  - **5-17 (30.2%; n = 179,226)**
  - **18-44 (34.8%; n = 206,466)**
  - **45-59 (7.0%; n = 41,674)**
  - **≥ 60 (3.6%; n = 21,058)**

- **Cases by outcome (Cumul.):**
  - **Discharged (51.15%; n = 313,015)**
  - **Referred (0.20%; n = 1,247)**
  - **Died (0.33%; n = 2,047)**
  - **Unknown (48.65%; n = 297,747)**
### Summary of key cholera indicators by Governorate

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Cumulative (27/04/2017 to 3/9/2017)</th>
<th>3 week trend</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cases</td>
<td>Deaths</td>
</tr>
<tr>
<td>Amran</td>
<td>62,698</td>
<td>159</td>
</tr>
<tr>
<td>Al Mahwit</td>
<td>36,670</td>
<td>136</td>
</tr>
<tr>
<td>Al Dhale'e</td>
<td>35,309</td>
<td>79</td>
</tr>
<tr>
<td>Abyan</td>
<td>22,164</td>
<td>35</td>
</tr>
<tr>
<td>Hajjah</td>
<td>67,237</td>
<td>384</td>
</tr>
<tr>
<td>Dhamar</td>
<td>53,278</td>
<td>145</td>
</tr>
<tr>
<td>Al Bayda</td>
<td>18,698</td>
<td>27</td>
</tr>
<tr>
<td>Amanat Al Asimah</td>
<td>67,734</td>
<td>64</td>
</tr>
<tr>
<td>Lahj</td>
<td>16,200</td>
<td>60</td>
</tr>
<tr>
<td>Raymah</td>
<td>10,503</td>
<td>106</td>
</tr>
<tr>
<td>Lajj</td>
<td>15,446</td>
<td>20</td>
</tr>
<tr>
<td>Ibb</td>
<td>43,170</td>
<td>262</td>
</tr>
<tr>
<td>Al Jawf</td>
<td>8,178</td>
<td>19</td>
</tr>
<tr>
<td>Taiz</td>
<td>37,681</td>
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<tr>
<td>Marib</td>
<td>3,622</td>
<td>7</td>
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<tr>
<td>Al Maharah</td>
<td>1,130</td>
<td>1</td>
</tr>
<tr>
<td>Sa'ada</td>
<td>2,920</td>
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<tr>
<td>Shabwah</td>
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<td>1</td>
</tr>
<tr>
<td>Moka't</td>
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<td>1</td>
</tr>
<tr>
<td>Say'on</td>
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<td>0</td>
</tr>
<tr>
<td>Yemen</td>
<td>612,009</td>
<td>2,047</td>
</tr>
</tbody>
</table>

1. Case Fatality Rate
2. Attack Rate (/10,000 population)
3. Trend based on average number of cases in previous 3 weeks:

- Increased trend ≥ +10% change
- Stable trend > -10% to < +10% change
- Decreased trend ≤ -10% change
- Interruption in transmission 0 cases for 3 consecutive weeks

Trend for each Governorate:

- **▲** Increased trend ≥ +10% change
- **▶** Stable trend > -10% to < +10% change
- **▼** Decreased trend ≤ -10% change
- **◼** Interruption in transmission 0 cases for 3 consecutive weeks
Table 2 | Summary of key laboratory indicators by Governorate

<table>
<thead>
<tr>
<th>Governorate</th>
<th>Rapid Diagnostic Kit (RDT)</th>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
<td>Total tested</td>
<td>Coverage</td>
</tr>
<tr>
<td>Abyan</td>
<td>22,164</td>
<td>150</td>
</tr>
<tr>
<td>Aden</td>
<td>16,200</td>
<td>217</td>
</tr>
<tr>
<td>Al Bayda</td>
<td>18,698</td>
<td>715</td>
</tr>
<tr>
<td>Al Dhale'e</td>
<td>35,309</td>
<td>144</td>
</tr>
<tr>
<td>Al Hudaydah</td>
<td>76,528</td>
<td>90</td>
</tr>
<tr>
<td>Al Jawf</td>
<td>8,178</td>
<td>646</td>
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<tr>
<td>Al Maharah</td>
<td>1,130</td>
<td>259</td>
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<tr>
<td>Al Mahwit</td>
<td>36,870</td>
<td>953</td>
</tr>
<tr>
<td>Amanat Al Asimah</td>
<td>67,734</td>
<td>2642</td>
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<tr>
<td>Amran</td>
<td>62,698</td>
<td>817</td>
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<tr>
<td>Dhamar</td>
<td>53,278</td>
<td>307</td>
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<tr>
<td>Hajjah</td>
<td>67,237</td>
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<td>Ibb</td>
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<td>279</td>
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<td>Lahj</td>
<td>15,446</td>
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<td>Marib</td>
<td>3,622</td>
<td>137</td>
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<td>Mokilla</td>
<td>244</td>
<td>48</td>
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<tr>
<td>Raymah</td>
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<td>Sa'a'da</td>
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<tr>
<td>Sana'a</td>
<td>31,646</td>
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<td>Say'oon</td>
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<td>10</td>
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<tr>
<td>Shabwah</td>
<td>743</td>
<td>62</td>
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<td>Taizz</td>
<td>37,681</td>
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</tr>
<tr>
<td>Yemen</td>
<td>612,009</td>
<td>11,414</td>
</tr>
</tbody>
</table>
E. Geographic distribution over time

Map 1a | Number of cases by governorate (Jan 2017 - Apr 2017)

Map 1b | Attack rate by governorate (Jan 2017 - Apr 2017)

Map 1c | Number of cases by governorate (Jan 2017 - Jun 2017)

Map 1d | Attack rate by governorate (Jan 2017 - Jun 2017)

Map 1e | Number of cases by governorate (Jan 2017 - present)

Map 1f | Attack rate by governorate (Jan 2017 - present)

Number of cholera cases

Attack rate (1/10,000)
Map 2 | Number of cases by district (W35 2017)

Map 3 | Attack rate by district (W35 2017)

الخريطة (2) عدد حالات الإصابة الأولوية
Map 2 | Number of cases by district (W35 2017)

الخريطة (3) معدل الإصابة الأولوية
Map 3 | Attack rate by district (W35 2017)
Epidemic curves by Governorate

- **Figure 3a** | Abyan
- **Figure 3b** | Aden
- **Figure 3c** | Al Bayda
- **Figure 3d** | Al Dhale'e
- **Figure 3e** | Al Hudaydah
- **Figure 3f** | Al Jawf
- **Figure 3g** | Al Maharah
- **Figure 3h** | Al Mahwit

Number of cases

- W39 2016
- W52 2016
- W13 2017
- W26 2017

0
1000
2000
3000
4000
5000
6000
7000
8000
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Yemen Cholera Response Portal
has been deployed since July 2017 to strengthen surveillance in response to the cholera outbreak in Yemen. http://ye.ewars.ws/login

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World Health Organization