



# اليمن Yemen

## الاستجابة للكوليرا Cholera Response

برنامج الترصد الالكتروني للأمراض  
Electronic Disease Early Warning System (eDEWS)

النشرة الوبائية الأسبوعية  
Weekly Epidemiological Bulletin  
W44 2017 (Oct 30-Nov 05)

Printed: 13:27 Tuesday, 07 November 2017 UTC

### جدول المحتويات Table of Contents

A. Summary indicators	ملخص المؤشرات أ.
B. Epidemic curve	المنحنى الوبائي ب.
C. Key indicators by Governorate	المؤشرات الرئيسية حسب المحافظة ج.
D. Laboratory indicators	المؤشرات المختبرية د.
E. Geographic distribution over time	التوزيع الجغرافي مع مرور الوقت د.
F. Districts reporting in past week	المديرية ذات الأولوية هـ.
G. Epidemic curves by Governorate	المنحنى الوبائي حسب المحافظة هـ.

### Highlights

#### Cumulative figures

- The cumulative total from 27 April 2017 to 5 Nov 2017 is 908,400 suspected cholera cases and 2,192 associated deaths, (CFR 0.24%). 991 have been confirmed by culture.
- The total proportion of severe cases among the suspected cases is 19%
- The national attack rate is 329.84 per 10,000. The fivspected cases.
- In total, 18,918 rapid diagnostic tests (RDT) have been performed which represents 20.1% coverage. 2,262 cultures have been performed which represents 22.3% coverage.
- The last positive culture was on 27 Oct 2017 in Al Hali and Al Marawea'ah districts (Al Hudeideh governorate)
- Among the 305 affected districts, 39 districts did not report any suspected case the last three consecutive 3 weeks.

#### Governorate and District level

- The trend at country level over the past 3 weeks is considered decreased.
- At governorate level, the trend from W40-W42 decrease or was stable in all governorates.
- No governorate is reporting a CFR higher than 1%.

#### Trends

- The weekly number of cases is decreasing for the 8th consecutive week.
- The weekly proportion of sever cases has significantly decreased representing now 10% of the admitted cases.
- The use of RDTs has significantly increased since week 40.

#### Week 44

- 16,389 suspected cases and 5 associated deaths were reported.
- 10 % are severe cases
- 1043 RDTs were performed, 205 were positive

## A. ملخص المؤشرات Summary indicators



**Cholera Response** | Cumulative figures from 27/04/2017 to 5/11/2017

**908,400**

حالات الاشتباه  
Suspected cases

حالة اشتباه في  
الأسبوع الحالي  
16,389 suspected cases  
in current week

**2,192**

الوفيات  
Associated deaths

حالة وفاة في  
الأسبوع الحالي  
5 associated deaths  
in current week

**0.24%**

معدل الاماته بين  
الحالات  
Case Fatality Rate

**96%**

المحافظات المتأثرة  
بالوباء  
Governorates  
affected

( 23 / 22 محافظة )  
( 22 / 23 governorates )

**92%**

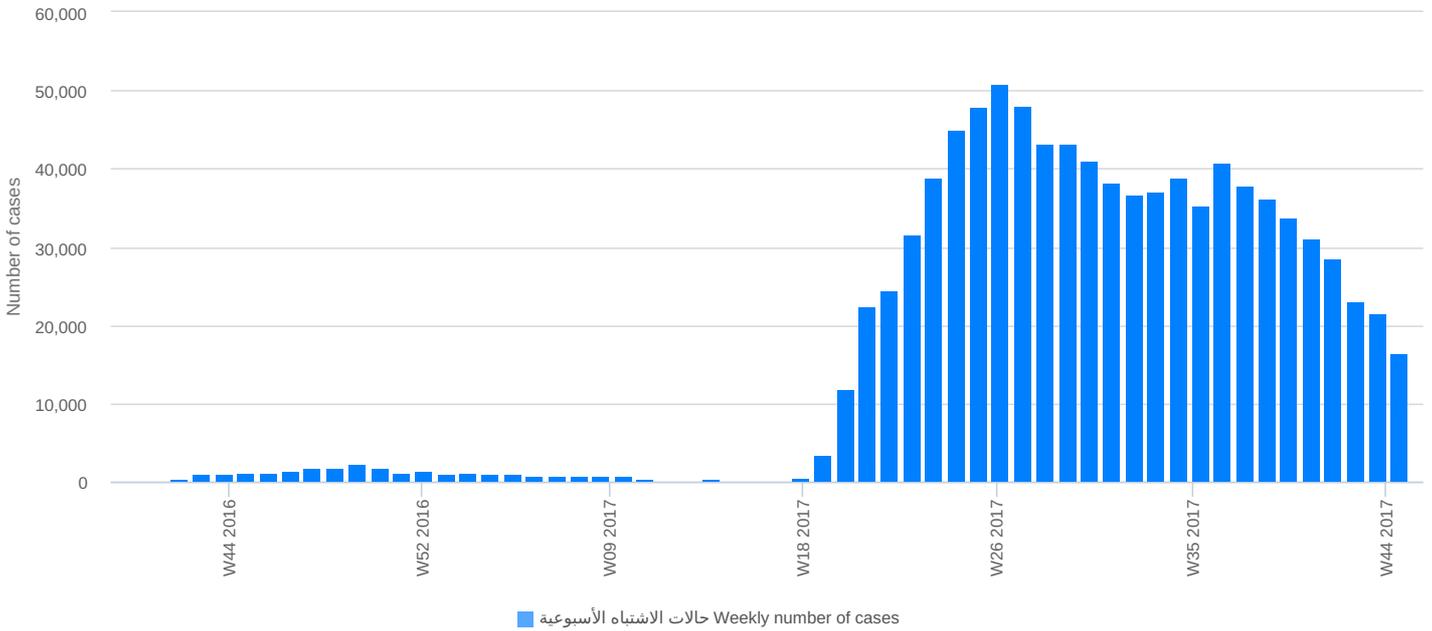
المديريات المتأثرة  
بالوباء  
Districts  
affected

( 333 / 305 مديرية )  
( 305 / 333 districts )

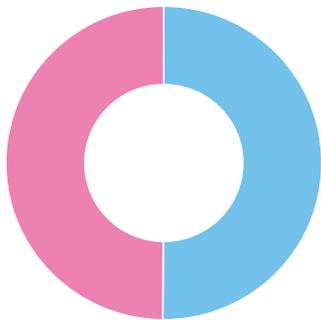
## B. المنحنى الوبائي Epidemic curve

الشكل (1) المنحنى الوبائي على المستوى الوطني

Figure 1 | Epidemic curve (Country)

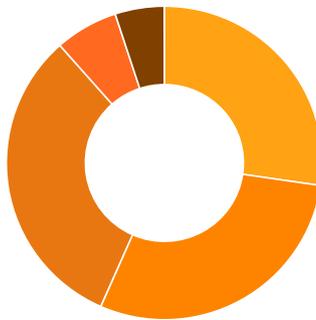


الشكل (2 أ) حالات الكوليرا على مستوى الجنس  
Figure 2a Cases by sex (Cumul.)



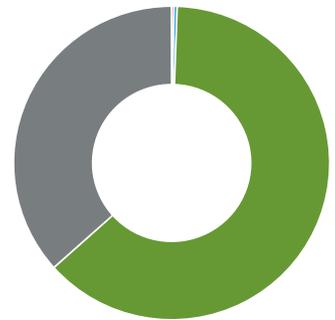
■ ذكر Male ( 50% ; n = 460,741 )  
■ أنثى Female ( 50% ; n = 458,008 )

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



■ < 5 ( 27.3% ; n = 245,046 )  
■ 5-17 ( 29.3% ; n = 262,905 )  
■ 18-44 ( 31.9% ; n = 286,191 )  
■ 45-59 ( 6.5% ; n = 57,984 )  
■ ≥ 60 ( 5.0% ; n = 45,172 )

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



■ شفاء Discharged ( 62.98% ; n = 572,082 )  
■ إحالة Referred ( 0.32% ; n = 2,928 )  
■ وفاة Died ( 0.24% ; n = 2,192 )  
■ غير معرف Unknown ( 36.70% ; n = 333,390 )

# Trends in cases by age distribution and dehydration status

Figure 2d | Trend in proportion of cases aged under 5<sup>1</sup>

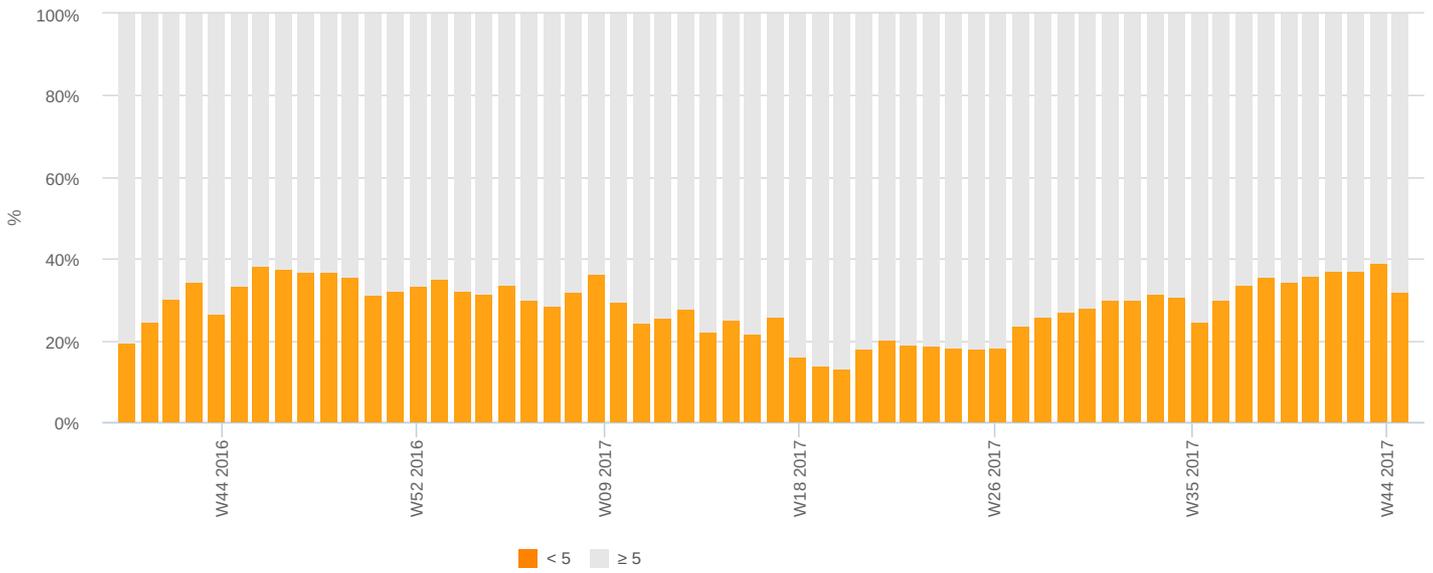
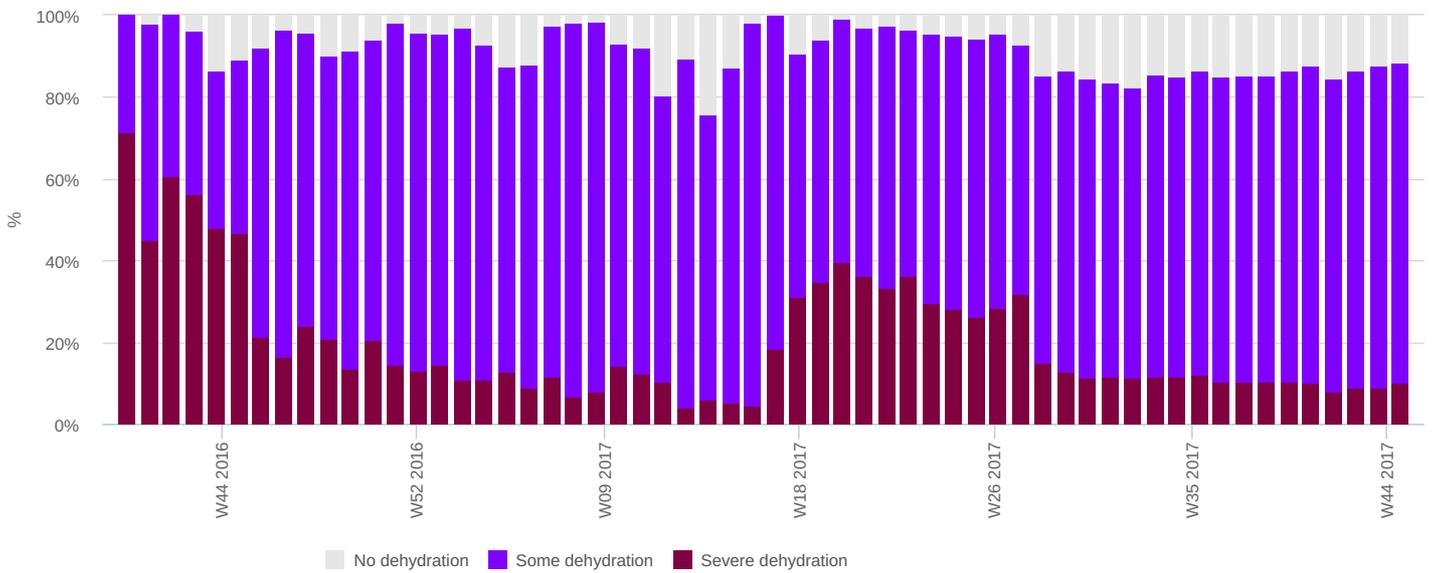


Figure 2e | Trend in proportion of cases by dehydration status<sup>1</sup>



<sup>1</sup> Trends in proportional age distribution and dehydration status always add up to 100% and do not give any indication of the number of cases reported. For this reason, these may reflect cases that are not visible in the epidemic curve due to the scale of the y-axis and the huge difference in the case counts between the first and second waves of the outbreak.

## C. Key indicators by governorate

جدول (1) خلاصة بالمؤشرات الرئيسية بالنسبة للمحافظات

Table 1 | Summary of key cholera indicators by Governorate

المحافظات Governorate	تراكمي Cumulative (27/04/2017 to 5/11/2017)				الاتجاه 3 أسابيع 3 week trend					
	حالات الاشتباه Cases	الوفيات Deaths	معدل الامانه CFR <sup>1</sup>	السكان Population	معدل الإصابة AR <sup>2</sup>	أسابيع -3 -3W	أسابيع -2 -2W	أسابيع -1 -1W	الأسبوع الحالي W	اتجاه Trend <sup>3</sup>
Amran عمران	89,162	170	0.19%	1,160,559	768.27	2,462	2,117	2,246	1,882	► -1%
Al Mahwit المحويت	52,764	145	0.27%	730,209	722.59	1,512	1,597	1,576	1,127	► 1%
Al Dhale'e الضالع	46,668	80	0.17%	731,496	637.98	999	827	660	351	▼ -20%
Abyan أبين	27,930	35	0.13%	570,832	489.29	303	213	119	120	▼ -44%
Sana'a صنعاء	65,786	122	0.19%	1,470,346	447.42	1,909	1,529	1,377	1,074	▼ -14%
Hajjah حجة	100,308	414	0.41%	2,329,741	430.55	3,094	2,825	2,396	1,172	▼ -14%
Dhamar ذمار	83,864	156	0.19%	2,012,264	416.76	3,494	2,791	2,805	2,623	► -7%
Al Hudaydah الحديدة	130,941	268	0.20%	3,238,199	404.36	6,941	4,492	3,867	2,725	▼ -24%
Al Bayda البيضاء	25,806	30	0.12%	759,388	339.83	558	437	438	351	► -8%
Amanat Al Asimah العاصمة	87,064	68	0.08%	2,827,824	307.88	1,870	1,814	1,961	1,677	► 4%
Al Jawf الجوف	13,563	21	0.15%	578,585	234.42	558	456	393	361	▼ -16%
Raymah ريمة	13,807	116	0.84%	606,776	227.55	402	278	282	235	▼ -12%
Lahj لحج	22,514	21	0.09%	1,008,864	223.16	548	71	22	25	▼ -90%
Aden عدن	19,757	62	0.31%	922,996	214.05	336	322	262	309	▼ -15%
Ibb إب	56,887	282	0.50%	2,957,138	192.37	1,390	1,291	1,053	643	▼ -15%
Taizz تعز	53,924	184	0.34%	2,998,300	179.85	1,334	1,162	1,185	1,072	► -3%
Marib مأرب	6,096	7	0.11%	358,542	170.02	254	244	335	109	▲ +21%
Sa'ada صعدة	8,419	5	0.06%	905,145	93.01	583	513	549	532	► 0%
Al Maharah المهرة	1,164	1	0.09%	148,478	78.40	0	1	0	0	▼ -100%
Shabwah شبوة	1,390	3	0.22%	604,243	23.00	34	12	2	1	▼ -87%
Mokla المكلا	568	2	0.35%	400,788	14.17	16	4	3	0	▼ -61%
Say'on سيئون	18	0	0.00%	219,953	0.82	1	1	2	0	▲ +50%
<b>Yemen اليمن</b>	<b>908,400</b>	<b>2,192</b>	<b>0.24%</b>	<b>27,540,666</b>	<b>329.84</b>	<b>28,598</b>	<b>22,997</b>	<b>21,533</b>	<b>16,389</b>	<b>▼ -12%</b>

<sup>1</sup> معدل الامانه بين الحالات

<sup>2</sup> معدل الإصابة لكل 10,000 من السكان

<sup>3</sup> تم حساب المنحنى بناء على متوسط عدد الحالات خلال ثلاثة أسابيع سابقة

<sup>1</sup> Case Fatality Rate

<sup>2</sup> Attack Rate (/10,000 population)

<sup>3</sup> Trend based on average number of cases in previous 3 weeks:

▲ منحنى مرتفع	غير بمعدل $\geq +10\%$
► منحنى مستقر	غير بمعدل $> -10\%$ to $< +10\%$
▼ منحنى منخفض	غير بمعدل $\leq -10\%$
■ انقطاع في الارسال	عدد 0 حالة خلال 3 أسابيع متتالية

▲ Increased trend	$\geq +10\%$ change
► Stable trend	$> -10\%$ to $< +10\%$ change
▼ Decreased trend	$\leq -10\%$ change
■ Interruption in transmission	0 cases for 3 consecutive weeks

## D. Laboratory

Figure 4 | RDT results by week

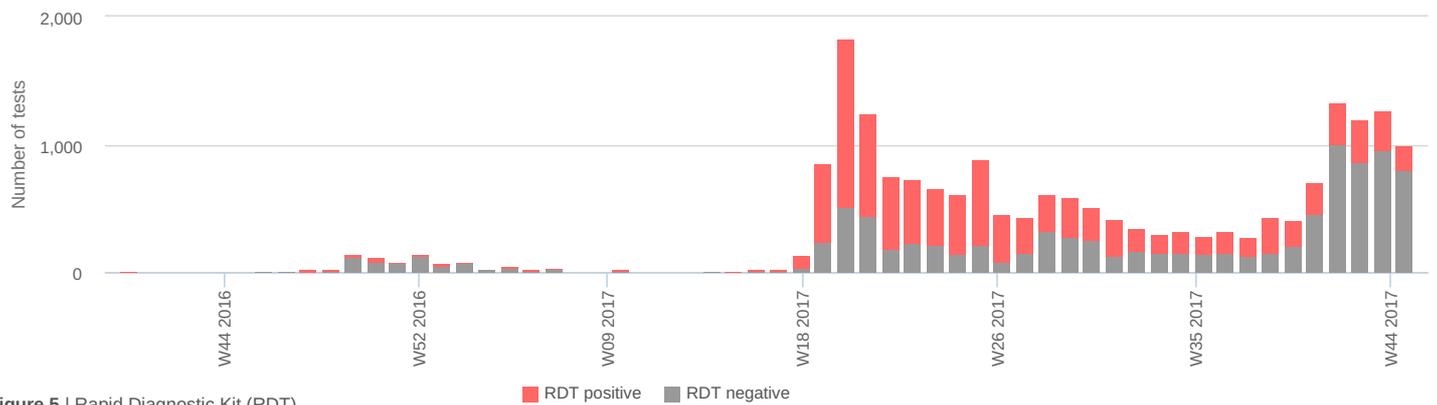


Figure 5 | Rapid Diagnostic Kit (RDT)

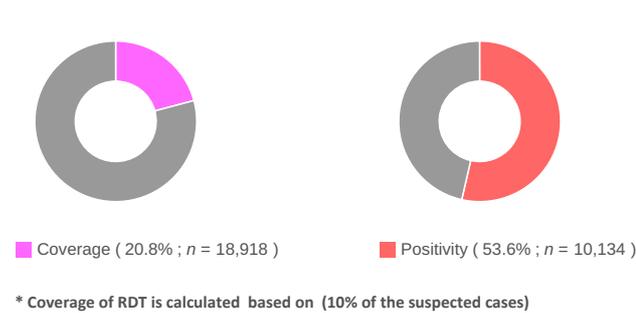


Figure 6 | Culture

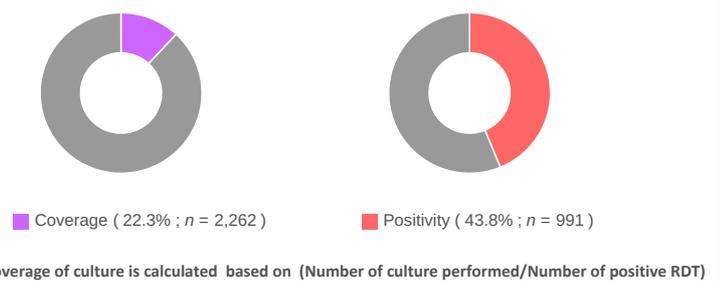


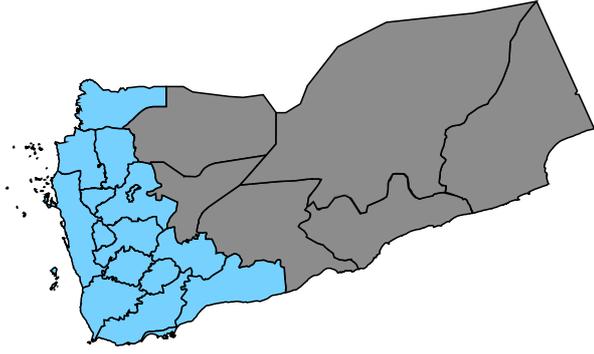
Table 2 | Summary of key laboratory indicators by Governorate

Governorate	Rapid Diagnostic Kit (RDT)					Culture			
	Cases	Total tested	Coverage	Total +ve	+vity rate	Total tested	Coverage	Total +ve	+vity rate
Abyan أبين	27,930	219	7.8%	147	67.1%	38	25.9%	23	60.5%
Aden عدن	19,757	469	23.7%	322	68.7%	150	46.6%	113	75.3%
Al Bayda البيضاء	25,806	1109	43.0%	644	58.1%	175	27.2%	9	5.1%
Al Dhale'e الضالع	46,668	243	5.2%	97	39.9%	36	37.1%	3	8.3%
Al Hudaydah الحديدة	130,941	1523	11.6%	647	42.5%	239	36.9%	148	61.9%
Al Jawf الجوف	13,563	1253	92.4%	867	69.2%	47	5.4%	12	25.5%
Al Maharah المهرة	1,164	260	223.4%	115	44.2%	23	20.0%	14	60.9%
Al Mahwit المحويت	52,764	1255	23.8%	791	63.0%	36	4.6%	10	27.8%
Amanat Al Asimah العاصمة	87,064	3782	43.4%	1843	48.7%	429	23.3%	181	42.2%
Amran عمران	89,162	880	9.9%	532	60.5%	80	15.0%	22	27.5%
Dhamar ذمار	83,864	823	9.8%	256	31.1%	101	39.5%	21	20.8%
Hajjah حجة	100,308	628	6.3%	146	23.2%	42	28.8%	13	31.0%
Ibb إب	56,887	464	8.2%	350	75.4%	55	15.7%	12	21.8%
Lahj لحج	22,514	1111	49.3%	570	51.3%	36	6.3%	12	33.3%
Marib مأرب	6,096	151	24.8%	121	80.1%	2	1.7%	0	0.0%
Mokla المكلا	568	105	184.9%	80	76.2%	55	68.8%	32	58.2%
Raymah ريمة	13,807	560	40.6%	371	66.3%	31	8.4%	5	16.1%
Sa'ada صعدة	8,419	910	108.1%	752	82.6%	12	1.6%	0	0.0%
Sana'a صنعاء	65,786	2108	32.0%	605	28.7%	242	40.0%	43	17.8%
Say'on سينون	18	17	944.4%	8	47.1%	10	125.0%	0	0.0%
Shabwah شبوة	1,390	122	87.8%	48	39.3%	48	100.0%	9	18.8%
Taizz تعز	53,924	926	17.2%	822	88.8%	375	45.6%	309	82.4%
<b>Yemen اليمن</b>	<b>908,400</b>	<b>18,918</b>	<b>20.8%</b>	<b>10,134</b>	<b>53.6%</b>	<b>2,262</b>	<b>22.3%</b>	<b>991</b>	<b>43.8%</b>

## E. Geographic distribution over time

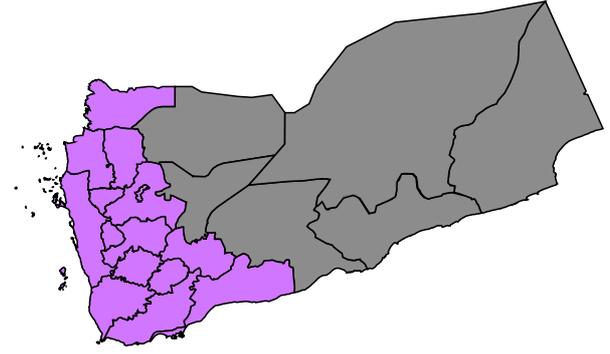
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



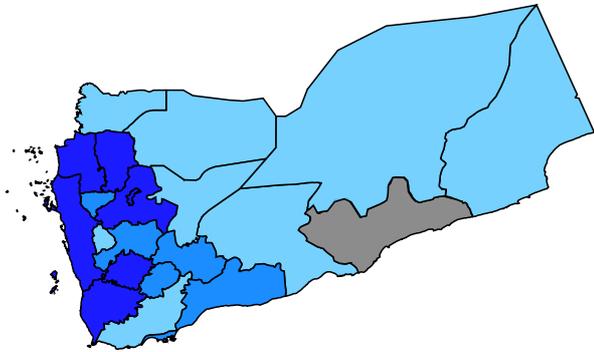
الخريطة (ب 1) معدل الإصابة للمحافظات

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



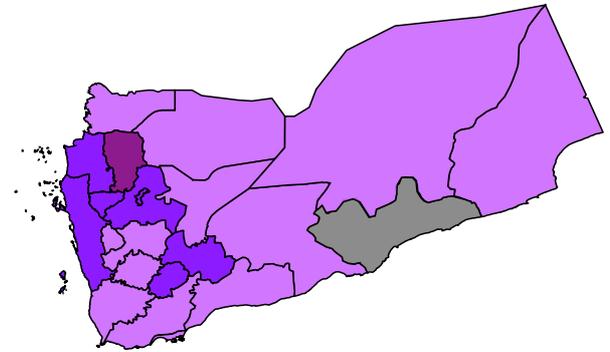
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



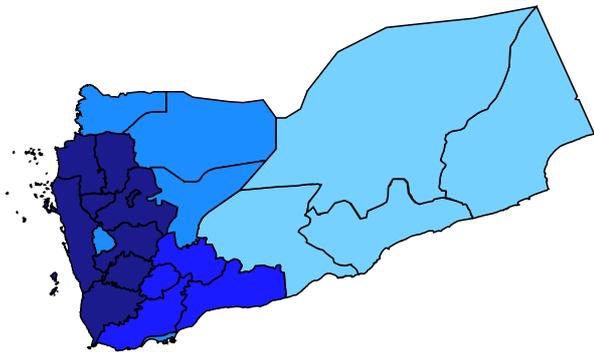
الخريطة (ب 1) معدل الإصابة للمحافظات

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



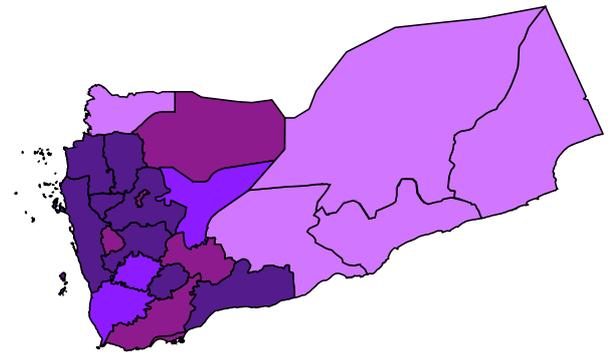
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



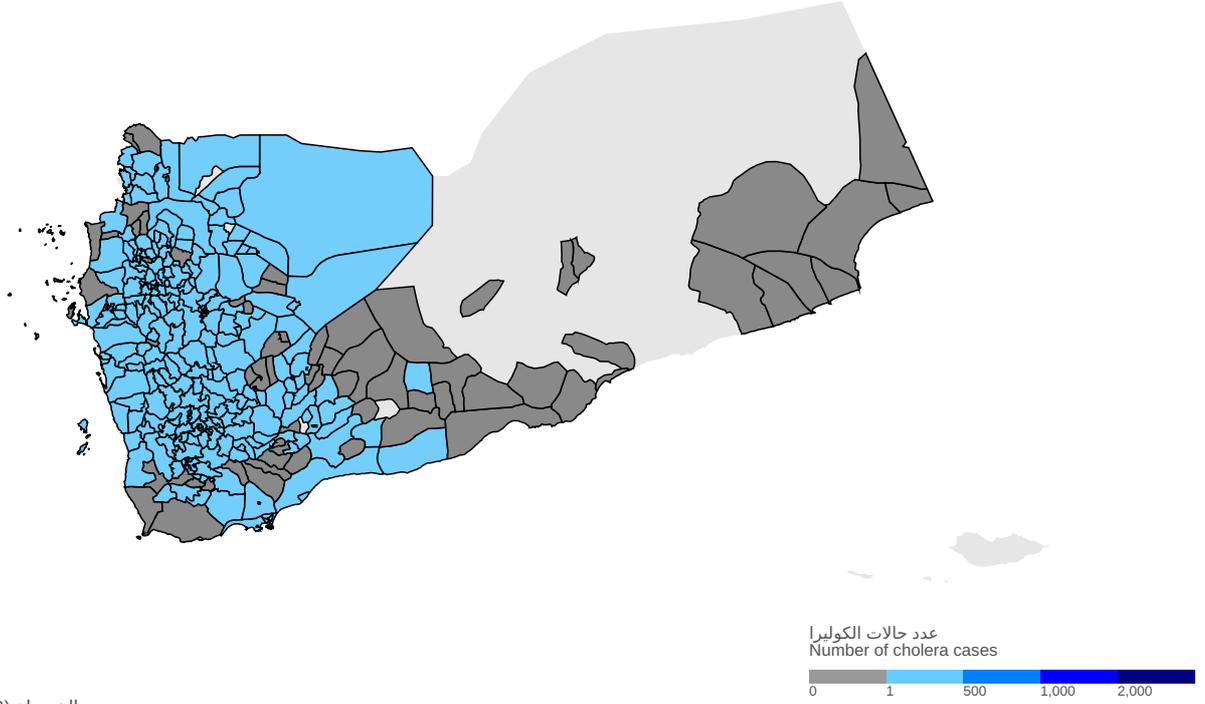
الخريطة (ب 1) معدل الإصابة للمحافظات

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

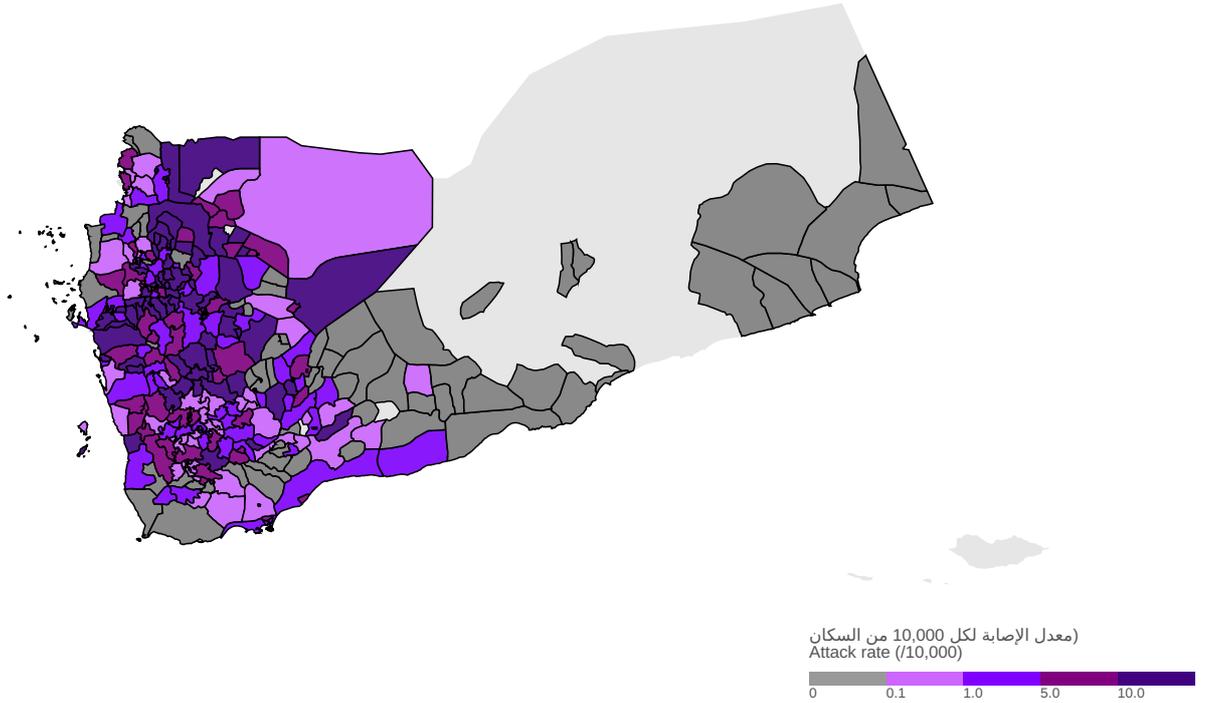


## F. المديريات ذات الأولوية Districts reporting in current week

الخريطة (2 أ) عدد حالات الاشتباه الأولوية  
Map 2 | Number of cases by district (W44 2017)



الخريطة (3 ب) معدل الإصابة الأولوية  
Map 3 | Attack rate by district (W44 2017)



## G. Epidemic curves by Governorate

Figure 3a | Abyan أبين

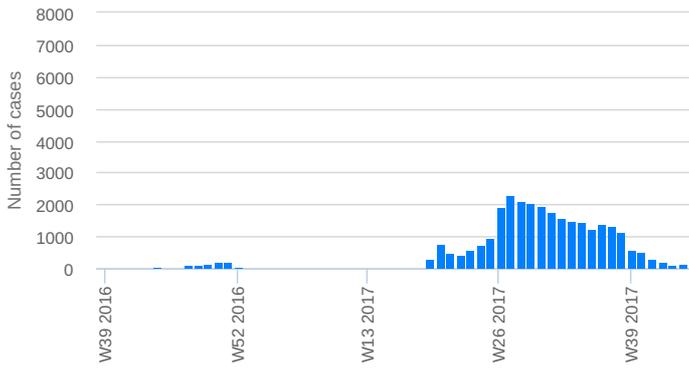


Figure 3b | Aden عدن

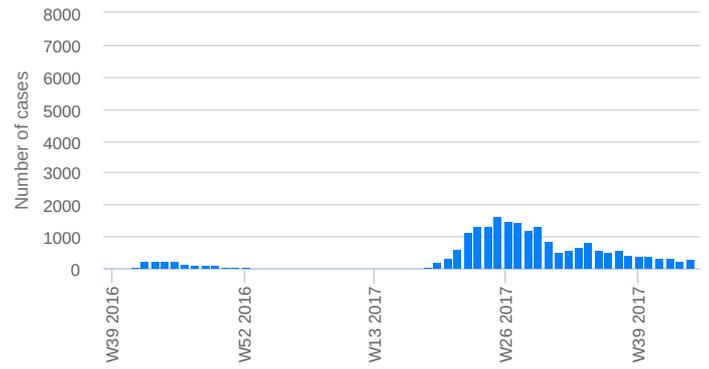


Figure 3c | Al Bayda البيضاء

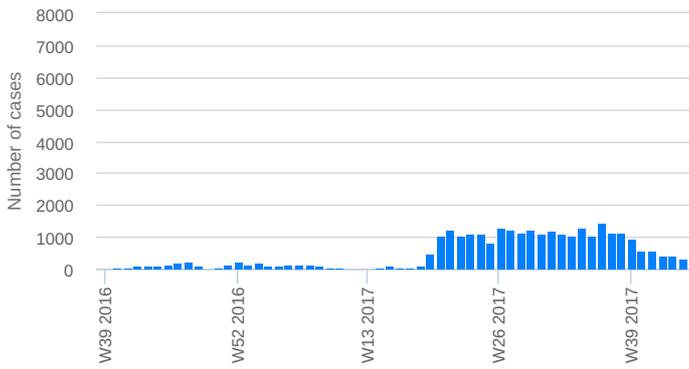


Figure 3d | Al Dhale'e الضالع

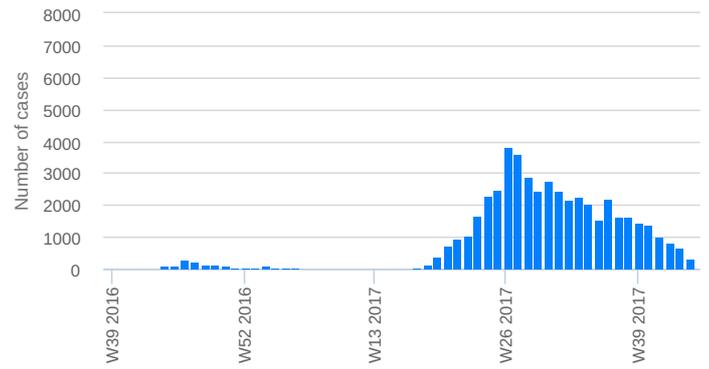


Figure 3e | Al Hudaydah الحديدة

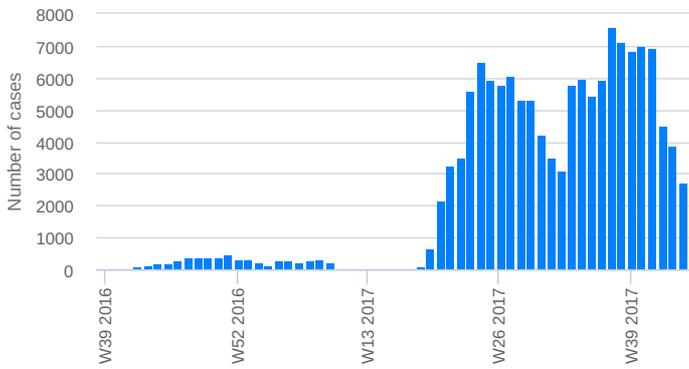


Figure 3f | Al Jawf الجوف

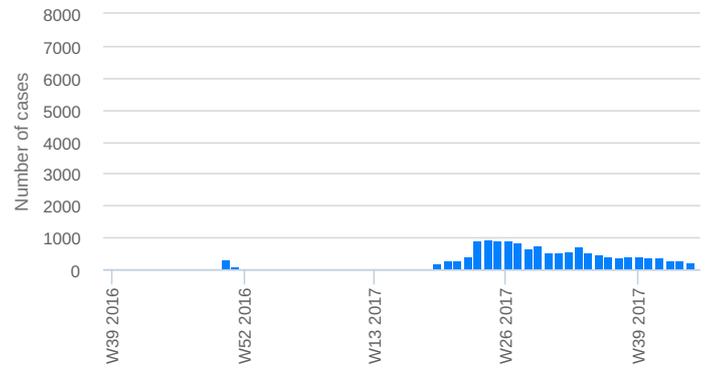


Figure 3g | Al Maharah المهرة

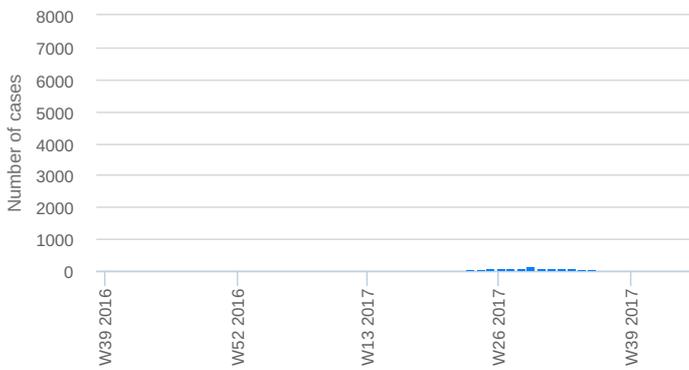


Figure 3h | Al Mahwit المحويت

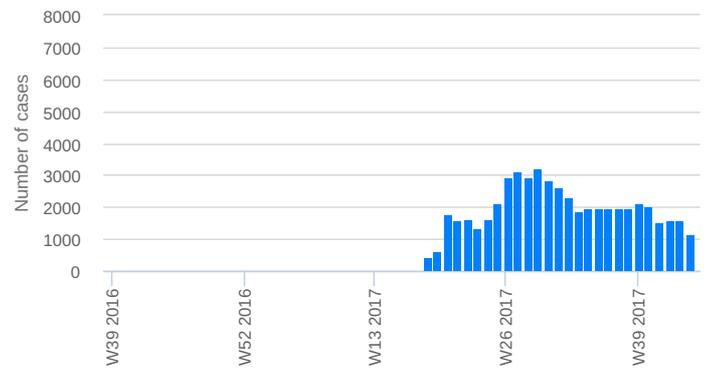


Figure 3i | Amanat Al Asimah أمانة العاصمة

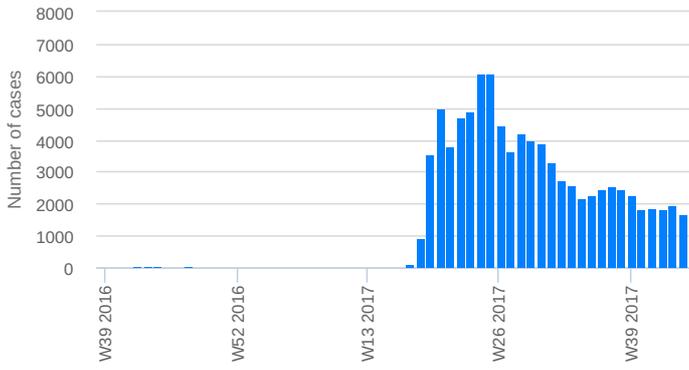


Figure 3j | Amran عمران

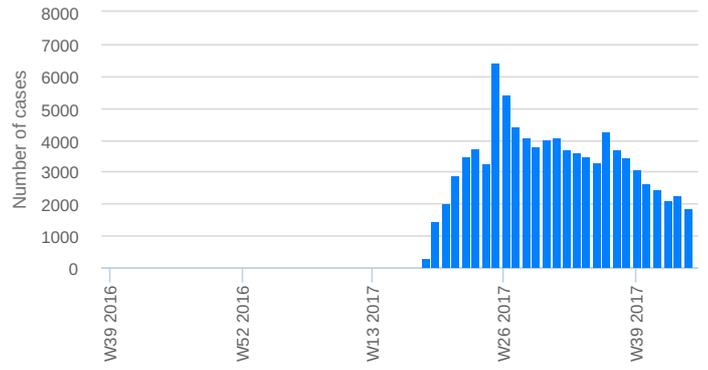


Figure 3k | Dhamar دمار

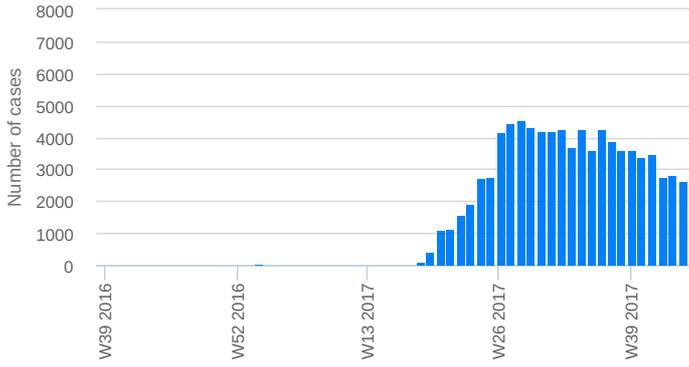


Figure 3l | Hajjah حجة

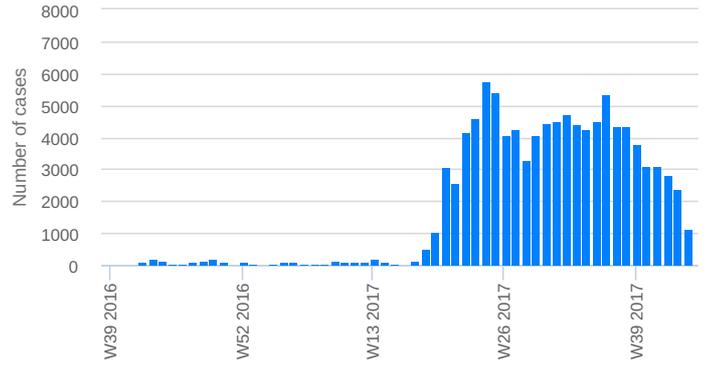


Figure 3m | Ibb إب

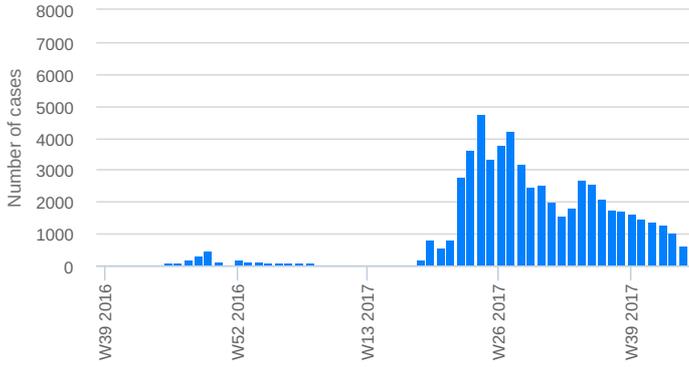


Figure 3n | Lahj لبح

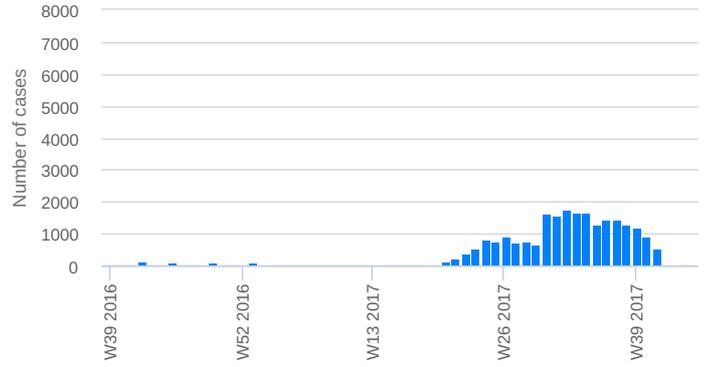


Figure 3o | Marib مأرب

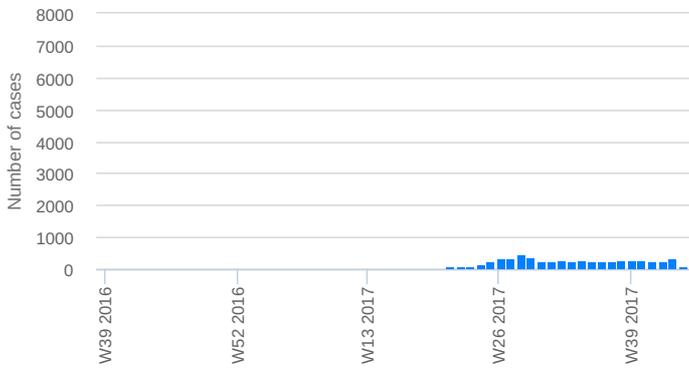


Figure 3p | Raymah ريمة

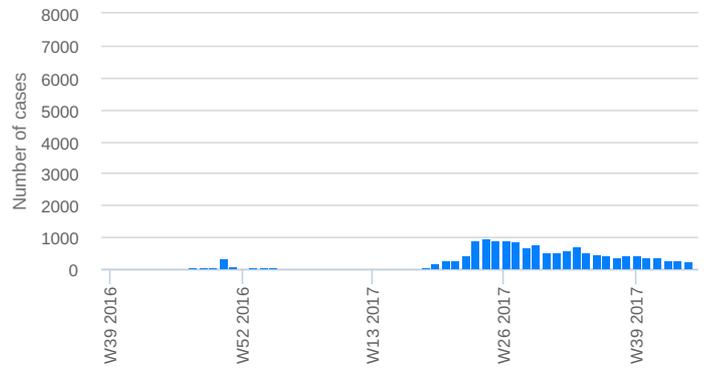


Figure 3q | Sa'ada صعدة

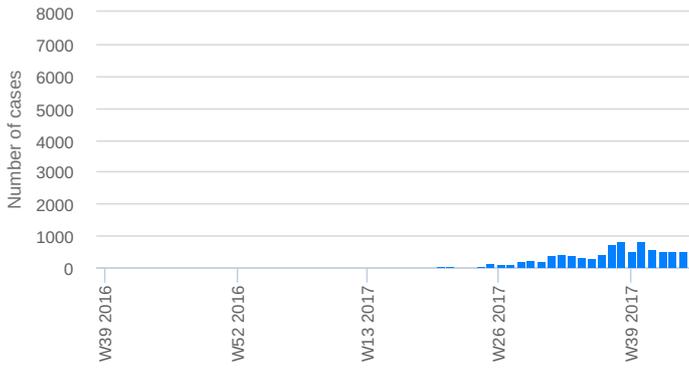


Figure 3r | Sana'a صنعاء

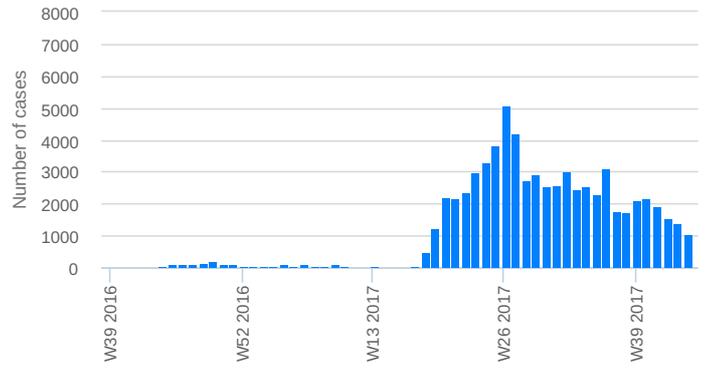


Figure 3s | Say'on سيئون

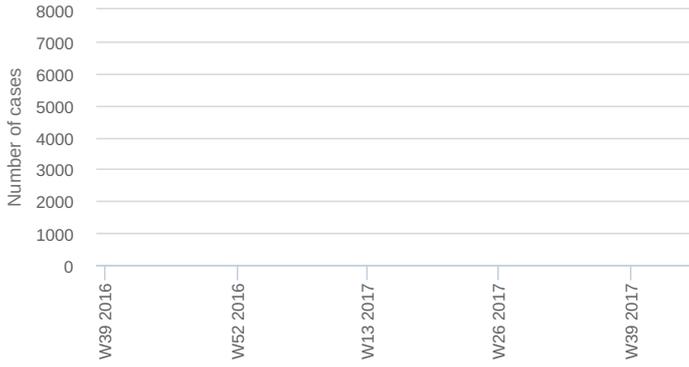


Figure 3t | Shabwah شبوة

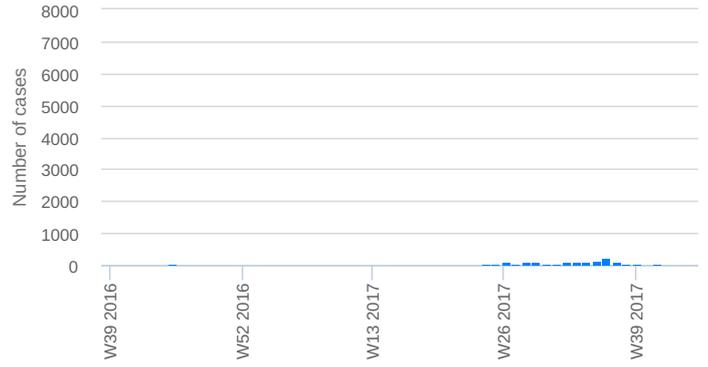
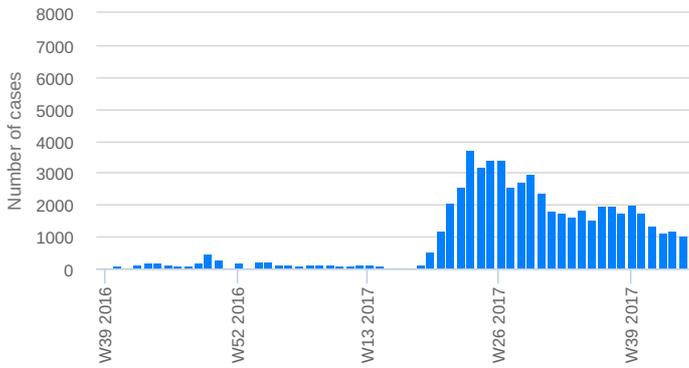


Figure 3v | Taizz تعز



للتواصل  
Contact Information

**Dr Reema Al Yusfi**  
eDEWS National Coordinator  
Ministry of Public Health and Population  
Sana'a, Yemen  
Email: [alyusfi@yahoo.com](mailto:alyusfi@yahoo.com)

**Malika Bouhenia**  
Epidemiologist  
WHO Country Office  
Sana'a, Yemen  
Email: [bouheniam@who.int](mailto:bouheniam@who.int)

**Sadeq Al-Wesabi**  
Communications Officer  
WHO Country Office  
Sana'a, Yemen  
Email: [hasansa@who.int](mailto:hasansa@who.int)

Powered by  
 Global  
EWARS

Learn more about the project:  
<http://ewars-project.org>

**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>

النافذة الخاصة بالاستجابة لوباء  
الكوليرا في اليمن  
تم النشر بتاريخ يوليو 2017 لتعزيز الترصد  
والاستجابة لوباء الكوليرا في اليمن  
<http://ye.ewars.ws/login>



World Health  
Organization