



# اليمن Yemen

## الاستجابة للكوليرا Cholera Response

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

النشرة الوبائية الأسبوعية  
Weekly Epidemiological Bulletin  
W37 2017 (Sep 11-Sep 17)

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### Highlights

- The cumulative total from 27 April 2017 to 10 September 2017 is 692,030 suspected cholera cases and 2,091 associated deaths (CFR 0.30%). 30,606 suspected cases and 17 associated deaths were reported in W37.
- The national attack rate is 243.18 per 10,000. The five governorates with the highest cumulative attack rates per 10,000 remain **Amran** (609.14), **Al Mahwit** (558.88), **Al Dhale'e** (538.35), **Abyan** (436.40) and **Hajjah** (330.48).
- Children under 5 years old represent 25.2% of total suspected cases. Children under 18 years old represent 55.5%.
- In total, 12,231 rapid diagnostic tests (RDT) have been performed which represents 17.7% coverage. 1,503 cultures have been performed which represents 18.8% coverage.

### Governorate and District level

- The trend at country level over the past 3 weeks is considered stable.
- At governorate level, the trend from W34-W36 increased in 8 governorates: **Amran** (+16%), **Al Dhale'e** (+13%), **Hajjah** (+12%), **Al Bayda** (+15%), **Sana'a** (+63%), **Sa'ada** (+25%), **Shabwah** (+57%), **Mokilla** (+31%).

### Conclusions and actions

- The increase in the number of cases in some governorates is worrying and WHO has responded by conducting field visits to the most affected governorates.
- In some DTCs, increases have been validated and attributed to a rise following the Eid holidays, with more gatherings and communal sharing of food.
- In other areas, the increased reporting of suspected cholera cases has not been found to correspond to high bed occupancy in DTCs or high demand for services in ORCs.
- In response to the continued increases in numbers of suspected cholera cases, WHO and health authorities are strongly recommend the following:
  1. **Strictly apply case definition.** All cases that are line listed MUST meet the case definition of suspected cholera. There must be the presence of acute watery diarrhoea, defined as 3 or more loose stools in the past 24 hours.
  2. **Strengthen laboratory testing.** At a minimum, 1 in 10 patients should be tested with rapid diagnostic test (RDT). Where feasible, exhaustive testing of all admissions to DTC is recommended. All RDT positive cases should be tested for culture.
  3. **Strengthen data collection and reporting.** Partners should use one register to record consultations at DTC and ORC, and use the line list register ONLY for those that meet case definition of suspected cholera.

## A. ملخص المؤشرات Summary indicators



**Cholera Response** | Cumulative figures from 27/04/2017 to 17/9/2017

**692,030**

حالات الاشتباه  
Suspected cases

حالة اشتباه في  
الأسبوع الحالي  
30,606 suspected cases  
in current week

**2,091**

الوفيات  
Associated deaths

حالة وفاة في  
الأسبوع الحالي  
17 associated deaths  
in current week

**0.30%**

معدل الاماته بين  
الحالات  
Case Fatality Rate

**96%**

المحافظات المتأثرة  
بالوباء  
Governorates  
affected

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

**91%**

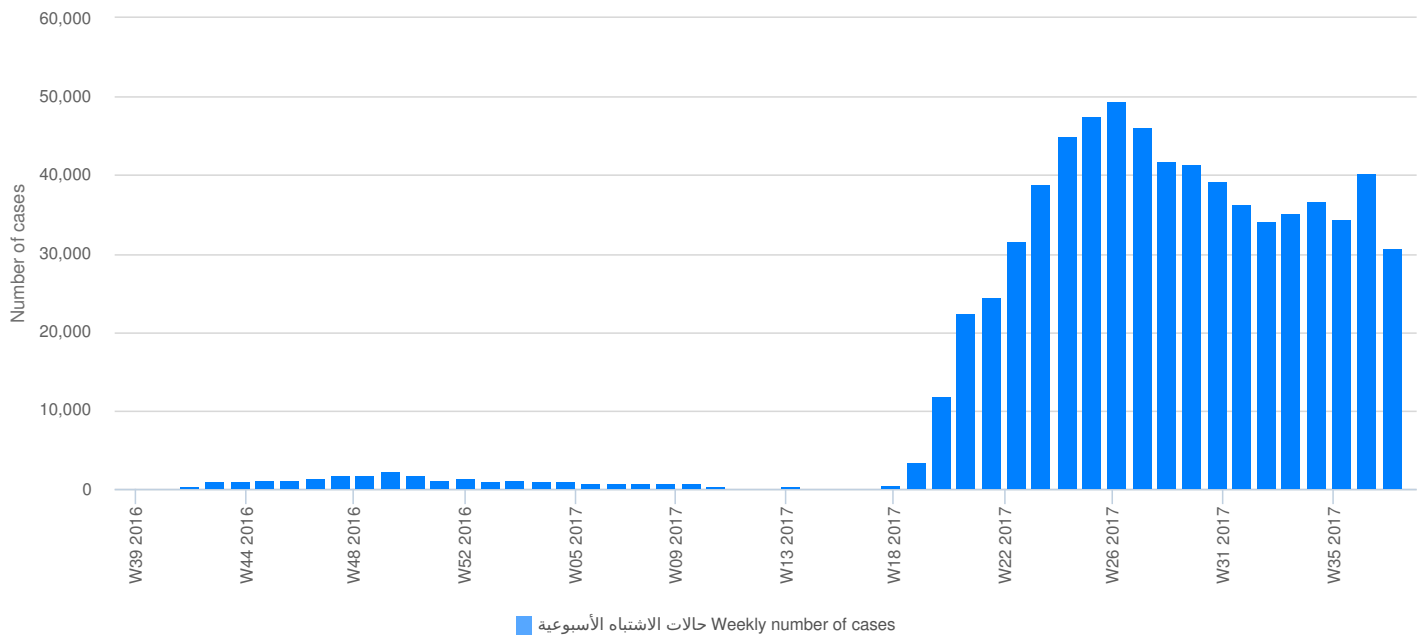
المديريات المتأثرة  
بالوباء  
Districts  
affected

( 333 / 302 مديرية )  
( 302 / 333 districts )

## B. المنحنى الوبائي Epidemic curve

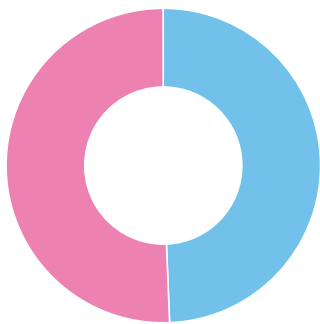
الشكل (1) المنحنى الوبائي على المستوى الوطني

Figure 1 | Epidemic curve (Country)



الشكل (أ 2) حالات الكوليرا على مستوى الجنس

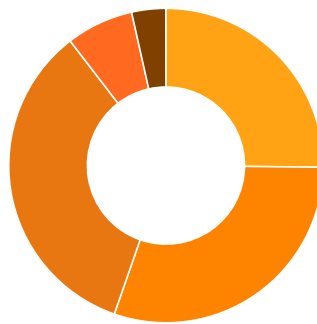
Figure 2a Cases by sex (Cumul.)



ذكر Male ( 49% ; n = 347,420 )  
أنثى Female ( 51% ; n = 355,441 )

الشكل (ب 2) حالات الكوليرا على مستوى الفئات العمرية

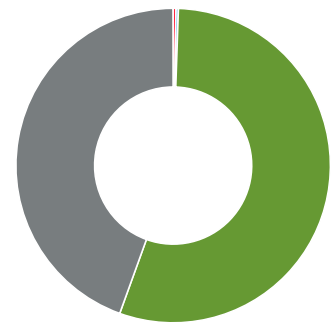
Figure 2b Cases by age (Cumul.)



< 5 ( 25.2% ; n = 169,065 )  
5-17 ( 30.2% ; n = 202,482 )  
18-44 ( 34.2% ; n = 229,820 )  
45-59 ( 6.9% ; n = 46,491 )  
≥ 60 ( 3.5% ; n = 23,565 )

الشكل (ج 2) حالات الكوليرا بالنسبة لحالة المريض

Figure 2c Cases by outcome (Cumul.)



شفاء Discharged ( 55.16% ; n = 381,741 )  
إحالة Referred ( 0.23% ; n = 1,605 )  
وفاة Died ( 0.30% ; n = 2,091 )

غير معرف Unknown ( 44.61% ; n = 308,684 )

## C. المحافظة الرئيسية حسب المحافظة 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 17/9/2017)					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	70,694	163	0.23%	1,160,559	609.14	3,493	3,309	4,268	3,068	▲ +16%
Al Mahwit المحويت	40,810	140	0.34%	730,209	558.88	1,988	1,986	1,958	1,911	► -1%
Al Dhale'e الصالح	39,380	79	0.20%	731,496	538.35	2,080	1,514	2,180	1,626	▲ +13%
Abyan أبين	24,911	35	0.14%	570,832	436.40	1,445	1,264	1,408	1,323	► 3%
Hajjah حجة	76,994	393	0.51%	2,329,741	330.48	4,259	4,483	5,232	1,908	▲ +12%
Dhamar ذمار	61,453	148	0.24%	2,012,264	305.39	4,270	3,608	4,251	3,716	► 5%
Al Bayda البيضاء	21,243	28	0.13%	759,388	279.74	1,284	1,040	1,444	1,035	▲ +15%
Al Hudaydah الحديدة	89,763	244	0.27%	3,238,199	277.20	5,943	5,409	5,917	5,630	► 3%
Amanat Al Asimah العاصمة	72,913	66	0.09%	2,827,824	257.84	2,148	2,242	2,426	2,217	► 7%
Sana'a صنعاء	37,586	122	0.32%	1,470,346	255.63	795	1,822	3,120	1,749	▲ +63%
Raymah ريمة	11,352	110	0.97%	606,776	187.09	524	462	410	393	▼ -12%
Aden عدن	17,242	60	0.35%	922,996	186.80	829	592	543	499	▼ -17%
Lahj لحج	18,146	20	0.11%	1,008,864	179.87	1,697	1,289	1,442	1,108	► -2%
Al Jawf الجوف	9,850	20	0.20%	578,585	170.24	906	847	971	659	► 7%
Ibb إب	47,104	267	0.57%	2,957,138	159.29	2,620	2,491	2,022	1,467	▼ -15%
Taizz تعز	41,422	179	0.43%	2,998,300	138.15	1,635	1,375	1,723	1,175	► 9%
Marib مأرب	4,287	7	0.16%	358,542	119.57	297	244	256	209	► -4%
Al Maharah المهرة	1,159	1	0.09%	153,306	75.60	63	39	21	8	▼ -49%
Sa'ada صعدة	4,090	5	0.12%	911,467	44.87	334	272	432	737	▲ +25%
Shabwah شبهوة	1,208	3	0.25%	636,008	18.99	82	136	239	73	▲ +57%
Moklla المكلا	409	1	0.24%	774,430	5.28	31	60	71	94	▲ +31%
Say'on سينون	14	0	0.00%	654,921	0.21	0	1	0	1	▼ -100%
<b>Yemen اليمن</b>	<b>692,030</b>	<b>2,091</b>	<b>0.30%</b>	<b>28,457,130</b>	<b>243.18</b>	<b>36,723</b>	<b>34,485</b>	<b>40,334</b>	<b>30,606</b>	<b>► 8%</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

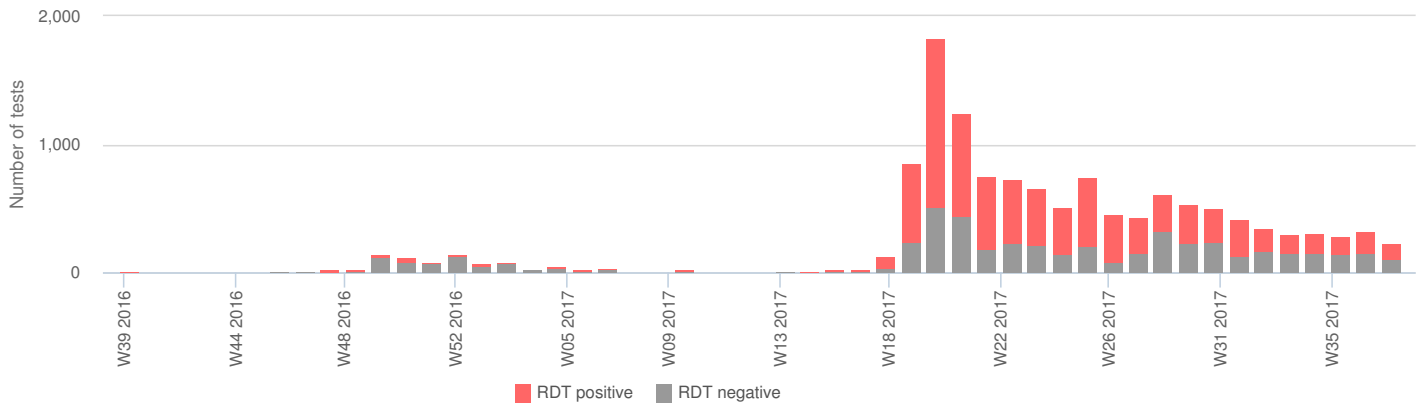


Figure 5 | Rapid Diagnostic Kit (RDT)

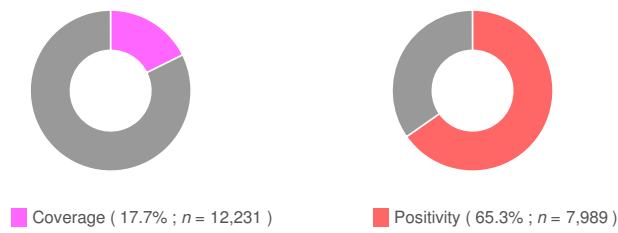


Figure 6 | Culture



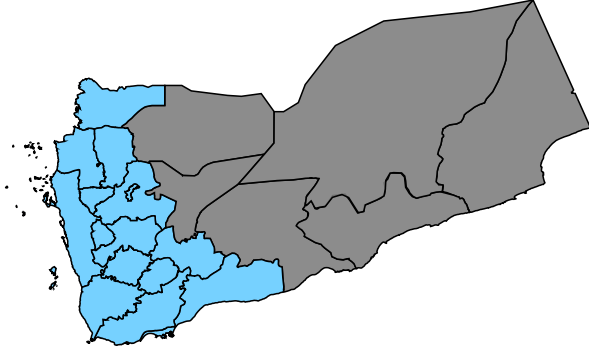
Table 2 | Summary of key laboratory indicators by Governorate

Governorate	Rapid Diagnostic Kit (RDT)					Culture			
	Cases	Total tested	Coverage	Total +ve	+ivity rate	Total tested	Coverage	Total +ve	+ivity rate
أبين أبين	24,911	166	6.7%	122	73.5%	36	29.5%	23	63.9%
عدن عدن	17,242	299	17.3%	207	69.2%	101	48.8%	80	79.2%
البيضاء البيضاء	21,243	740	34.8%	532	71.9%	111	20.9%	8	7.2%
الضالع الضالع	39,380	189	4.8%	77	40.7%	15	19.5%	3	20.0%
الحديدة الحديدة	89,763	150	1.7%	51	34.0%	19	37.3%	1	5.3%
الجوف الجوف	9,850	871	88.4%	617	70.8%	39	6.3%	12	30.8%
المهرة المهرة	1,159	259	223.5%	114	44.0%	22	19.3%	14	63.6%
المحويت المحويت	40,810	986	24.2%	692	70.2%	32	4.6%	9	28.1%
أمانة العاصمة Amanat Al Asimah	72,913	2756	37.8%	1661	60.3%	302	18.2%	160	53.0%
عمران عمران	70,694	822	11.6%	495	60.2%	42	8.5%	18	42.9%
ذمار ذمار	61,453	313	5.1%	225	71.9%	83	36.9%	21	25.3%
حجة حجة	76,994	512	6.6%	108	21.1%	19	17.6%	10	52.6%
إب إب	47,104	300	6.4%	259	86.3%	30	11.6%	12	40.0%
لحج لحج	18,146	957	52.7%	516	53.9%	32	6.2%	9	28.1%
مأرب مأرب	4,287	142	33.1%	120	84.5%	2	1.7%	0	0.0%
المكلا المكلا	409	61	149.1%	52	85.2%	35	67.3%	17	48.6%
ريمة ريمة	11,352	490	43.2%	323	65.9%	27	8.4%	5	18.5%
صعدة صعدة	4,090	907	221.8%	750	82.7%	2	0.3%	2	100.0%
صنعاة صنعاة	37,586	534	14.2%	415	77.7%	142	34.2%	39	27.5%
سيئون سيئون	14	13	928.6%	7	53.8%	9	128.6%	0	0.0%
شبوة شبوة	1,208	85	70.4%	27	31.8%	36	133.3%	4	11.1%
تعز تعز	41,422	679	16.4%	619	91.2%	367	59.3%	301	82.0%
<b>اليمن اليمن</b>	<b>692,030</b>	<b>12,231</b>	<b>17.7%</b>	<b>7,989</b>	<b>65.3%</b>	<b>1,503</b>	<b>18.8%</b>	<b>748</b>	<b>49.8%</b>

## E. التوزيع الجغرافي مع مرور الوقت Geographic distribution over time

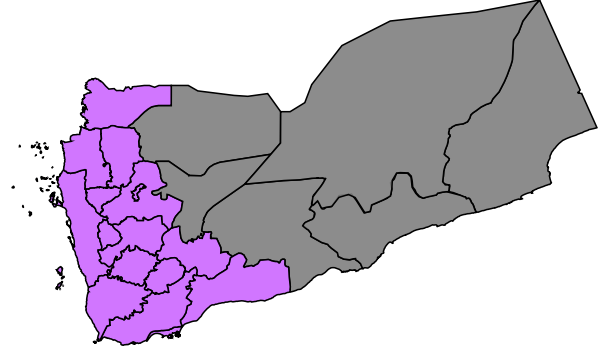
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



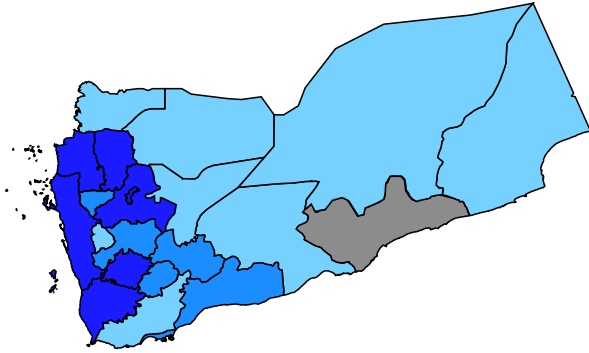
الخريطة (ب 1) معدل الإصابة للمحافظات

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



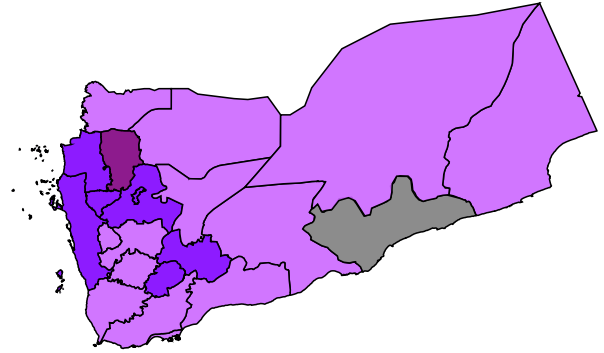
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



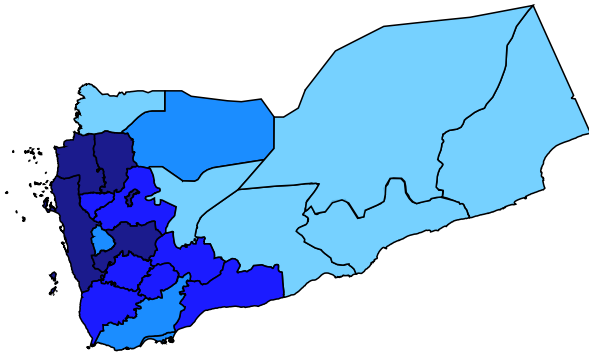
الخريطة (ب 1) معدل الإصابة للمحافظات

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



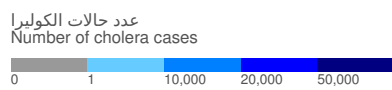
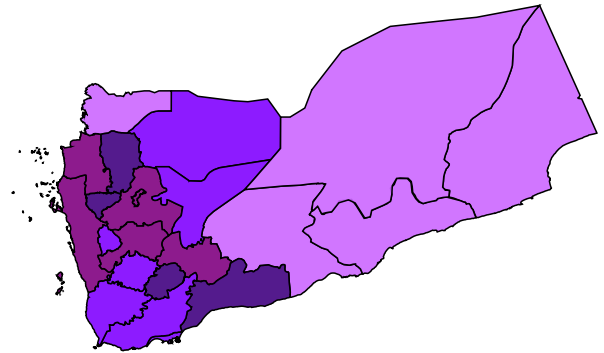
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



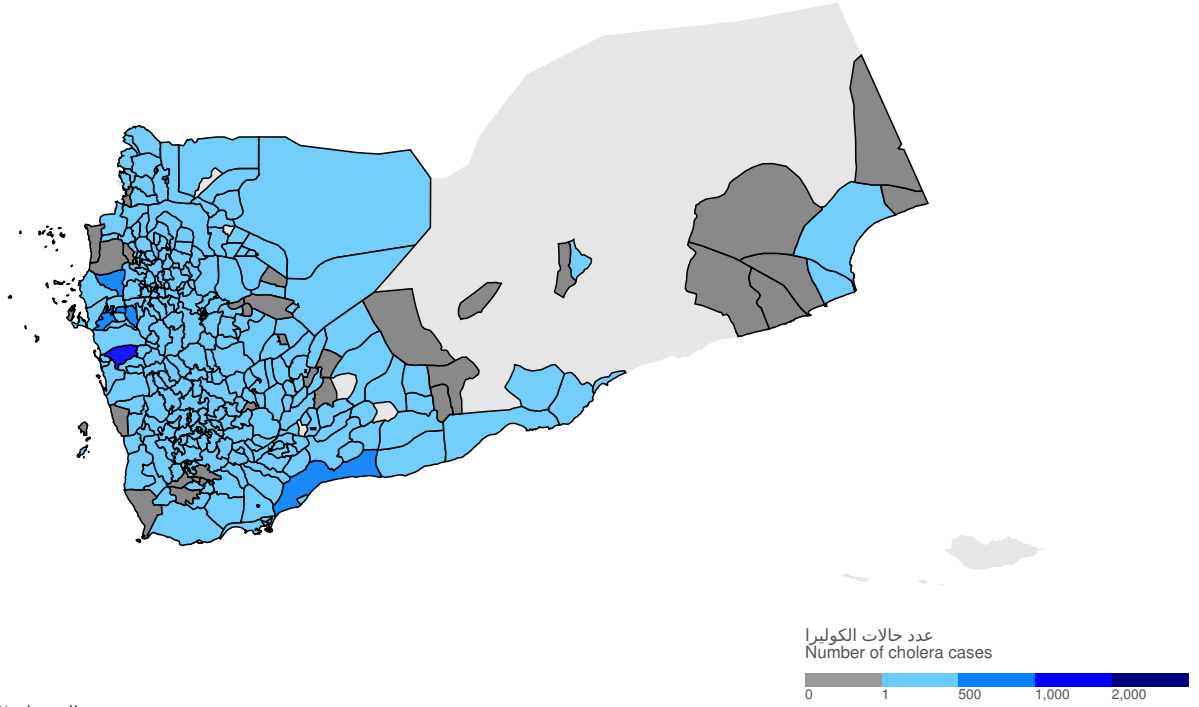
الخريطة (ب 1) معدل الإصابة للمحافظات

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

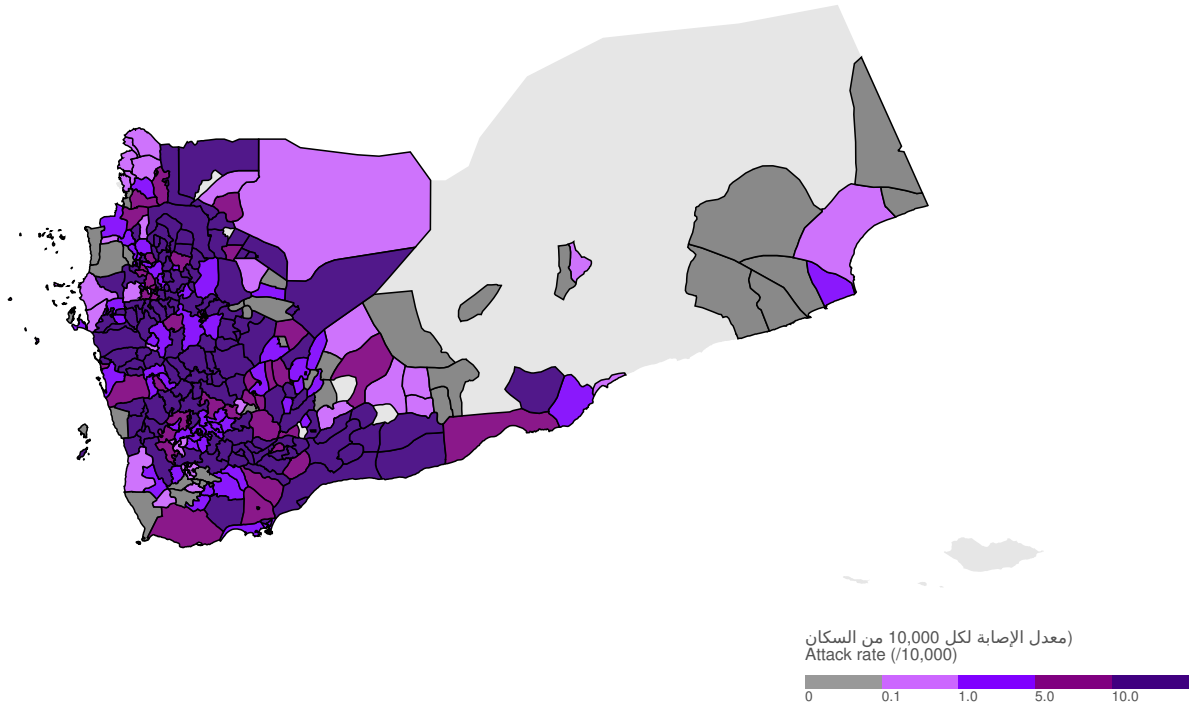


## F. المديريات ذات الأولوية Districts reporting in current week

الخريطة (2 أ) عدد حالات الاشتباه الأولوية  
Map 2 | Number of cases by district (W37 2017)



الخريطة (3 ب) معدل الإصابة الأولوية  
Map 3 | Attack rate by district (W37 2017)



## G. Epidemic curves by Governorate

Figure 3a | أبين Abyan

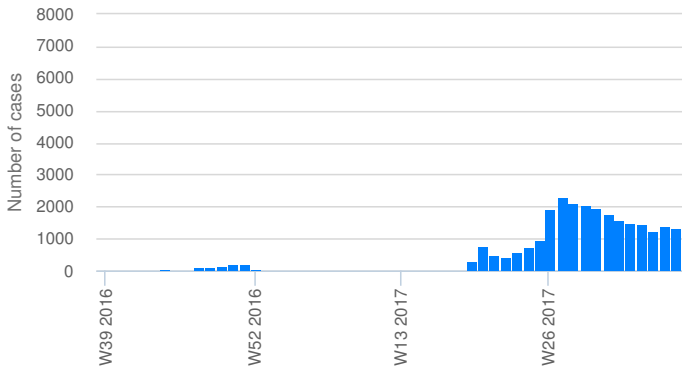


Figure 3b | عدن Aden

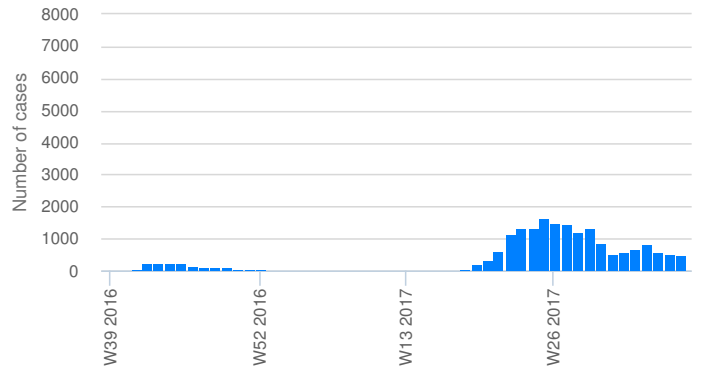


Figure 3c | البيضاء Al Bayda

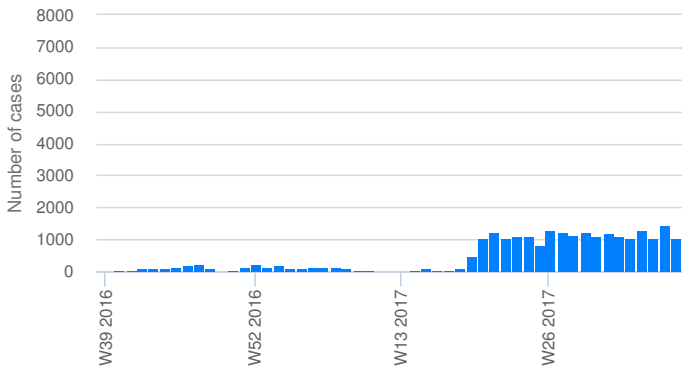


Figure 3d | الضالع Al Dhale'e

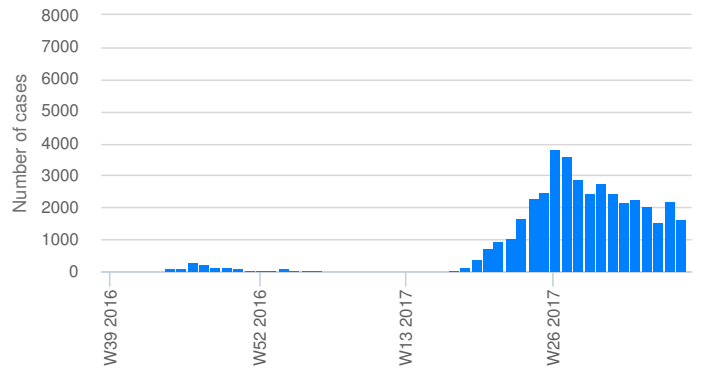


Figure 3e | الحديدة Al Hudaydah

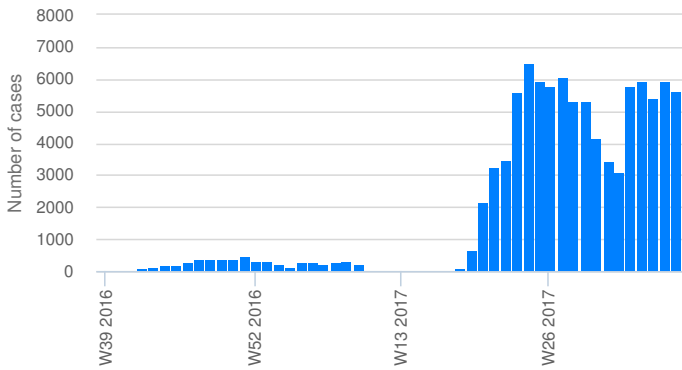


Figure 3f | الجوف Al Jawf

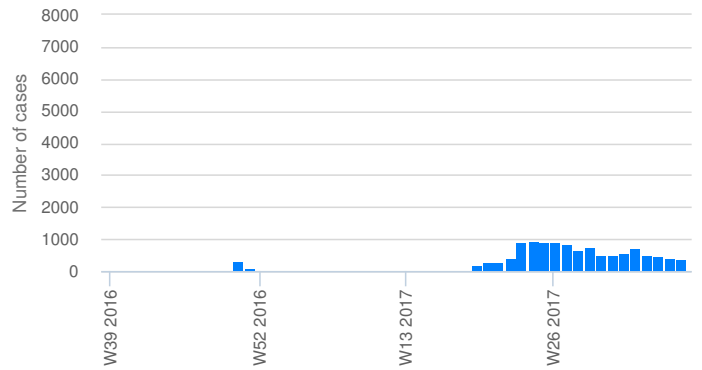


Figure 3g | Al Maharah المهرة

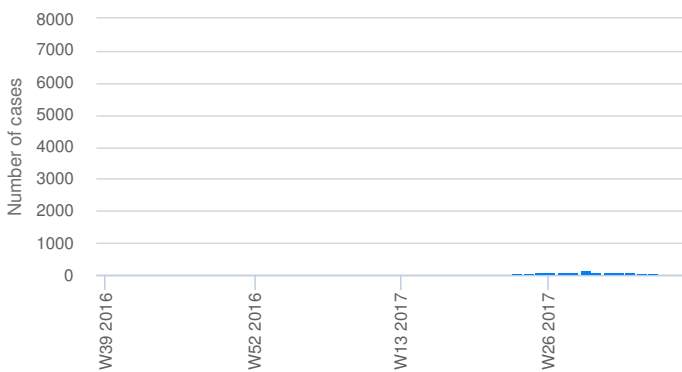


Figure 3h | Al Mahwit المحويت

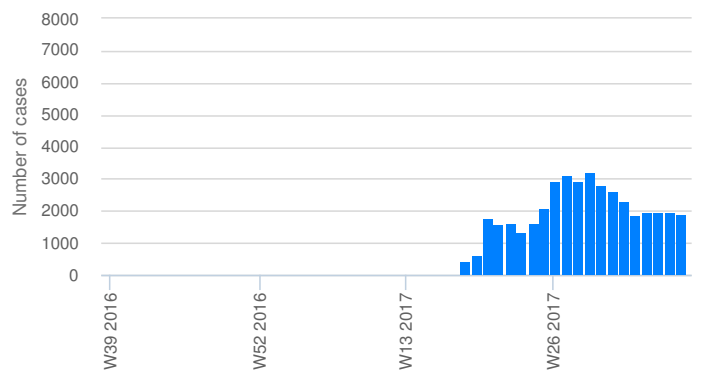


Figure 3i | Amanat Al Asimah أمانة العاصمة

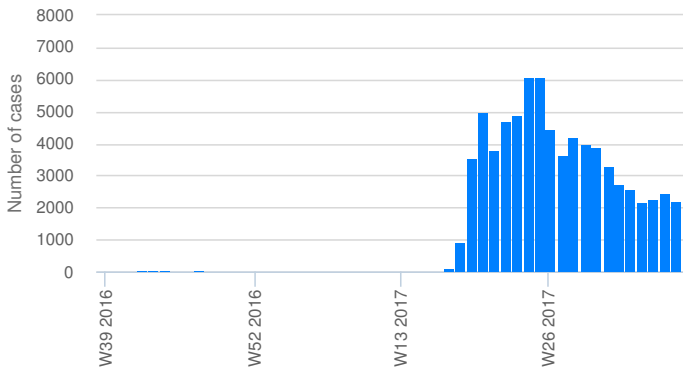


Figure 3j | Amran عمران

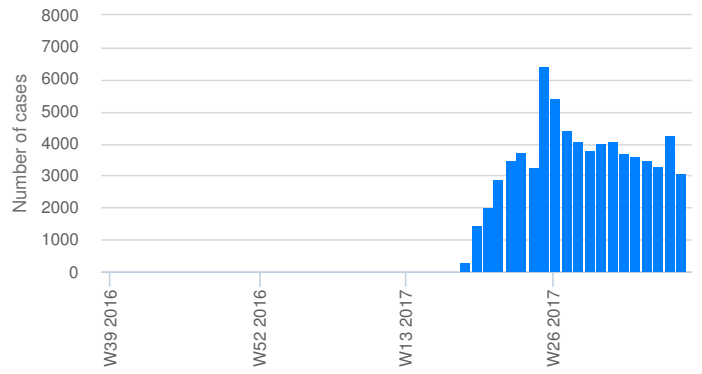


Figure 3k | Dhamar ذمار

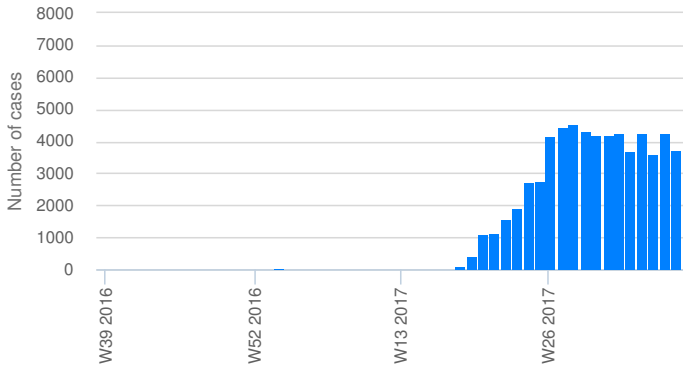


Figure 3l | Hajjah حجة

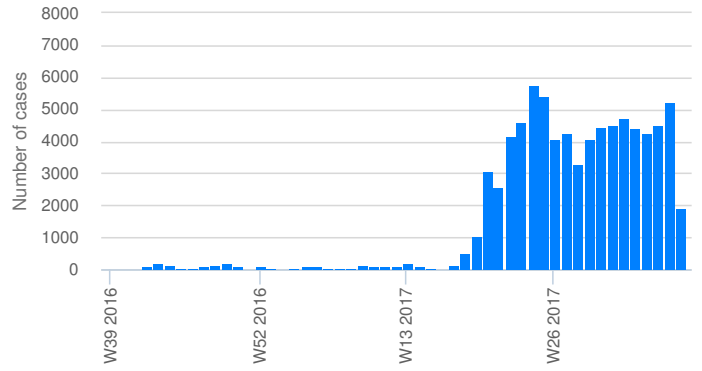


Figure 3m | Ibb إب

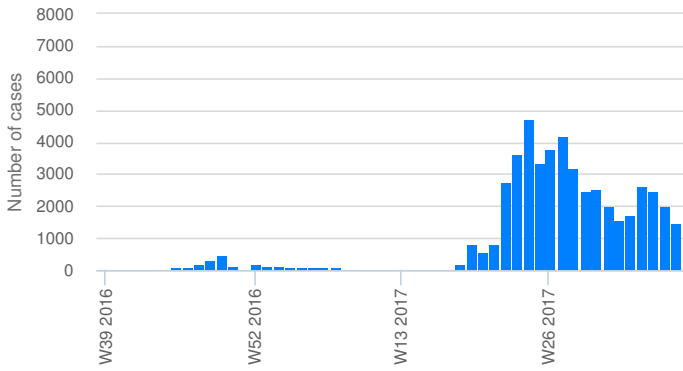


Figure 3n | Lahj لحج

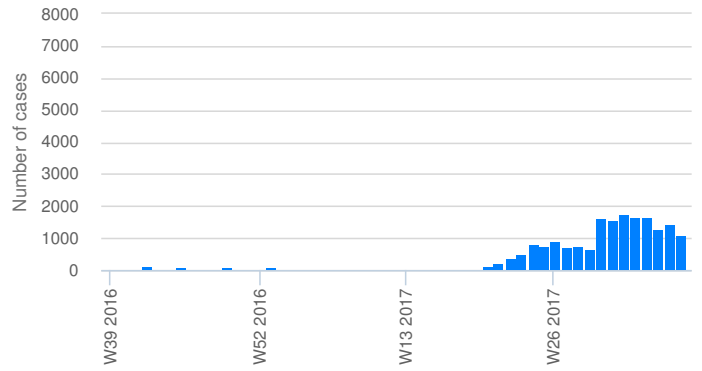


Figure 3o | Marib مأرب

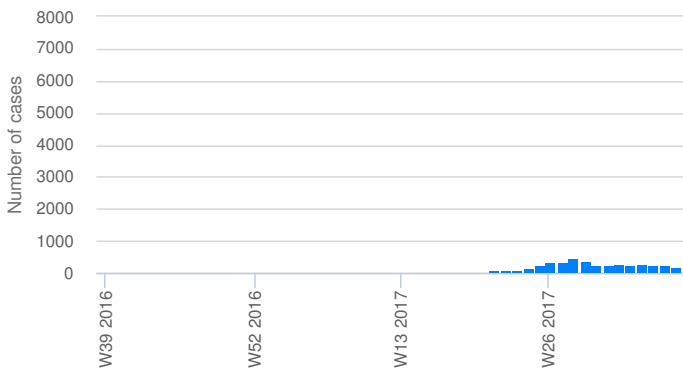


Figure 3p | Raymah ريمة

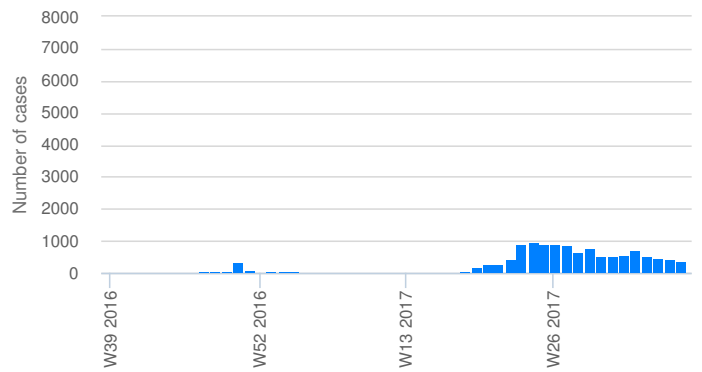




Figure 3q | Sa'ada صعدة

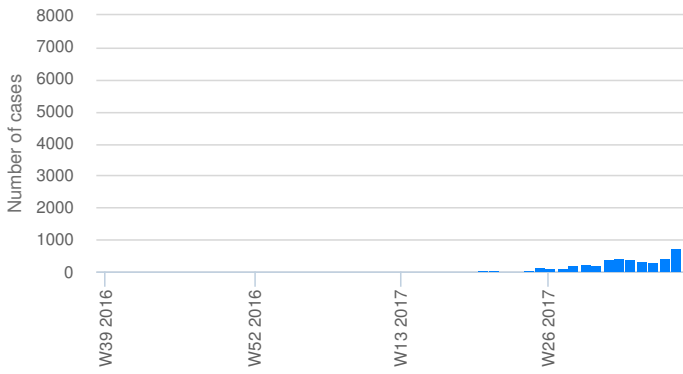


Figure 3r | Sana'a صنعاء

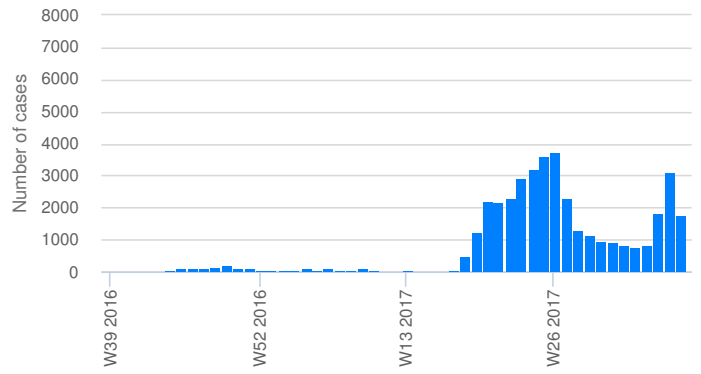


Figure 3s | Say'on سيئون

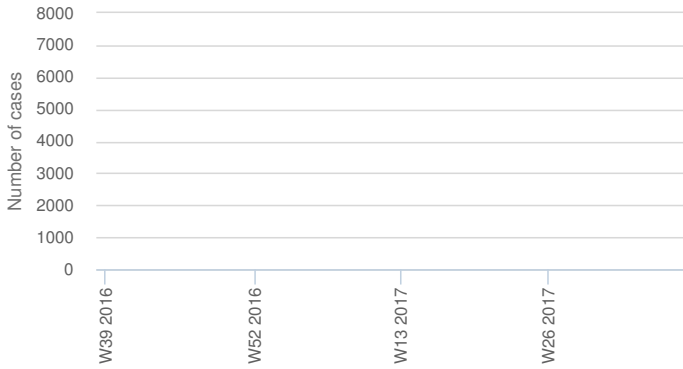


Figure 3t | Shabwah شبوة

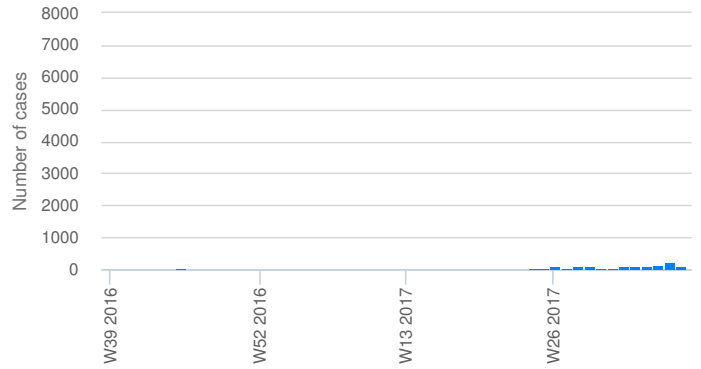
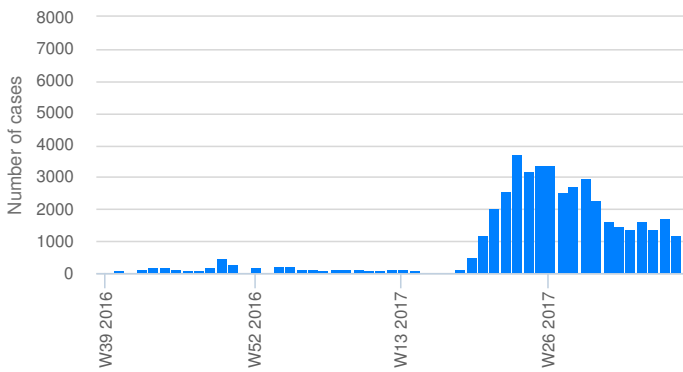


Figure 3v | Taizz تعز



للتواصل  
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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>



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