



# اليمن Yemen

## الاستجابة للكوليرا Cholera Response

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

النشرة الوبائية الأسبوعية  
Weekly Epidemiological Bulletin  
W41 2017 (Oct 09-Oct 15)

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### Highlights

- The cumulative total from 27 April 2017 to 15 October 2017 is 844,046 suspected cholera cases and 2,168 associated deaths, (CFR 0.26%). 26,137 suspected cases and 11 associated deaths were reported in W41.
- The national attack rate is 296.6 per 10,000. The five governorates with the highest cumulative attack rates per 10,000 are Amran (711), Al Mahwit (662), Al Dhale'e (612), Abyan (481) and Sana'a (420).
- Among the 305 affected districts, 23 districts did not report any case the last three consecutive 3 weeks.
- Children under 5 years old represent 27% of total suspected cases. Children under 18 years old represent 57%.
- In total, 15,381 rapid diagnostic tests (RDT) have been performed which represents 18.2% coverage. 1,820 cultures have been performed which represents 19.6% coverage. On week 41, 1258 RDTs were performed (twice as much as the previous week), 297 were positive, only 12 cultures were performed (0 positive).

### Governorate and District level

- The trend at country level over the past 3 weeks is considered stable.
- At governorate level, the trend from W38-W40 increased in Saada governorate (+12%).
- No governorate is reporting a CFR higher than 1%.

### Conclusion

- WHO is strengthening the data collection and reporting.
- The following recommendations are still very important and must be applied in all DTCs and ORCs:  
ALL line listed cases 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.
- the cholera line list register should not be used for the recording of all visits to DTC and ORC: one register to record consultations at DTC and ORC and one line list register only for those that meet case definition of suspected cholera must be put in place.

## A. ملخص المؤشرات Summary indicators



**Cholera Response** | Cumulative figures from 27/04/2017 to 15/10/2017

**844,046**

حالات الاشتباه  
Suspected cases

حالة اشتباه في  
الأسبوع الحالي  
26,137 suspected cases  
in current week

**2,168**

الوفيات  
Associated deaths

حالة وفاة في  
الأسبوع الحالي  
11 associated deaths  
in current week

**0.26%**

معدل الاماته بين  
الحالات  
Case Fatality Rate

**96%**

المحافظات المتأثرة  
بالوباء  
Governorates  
affected

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

**92%**

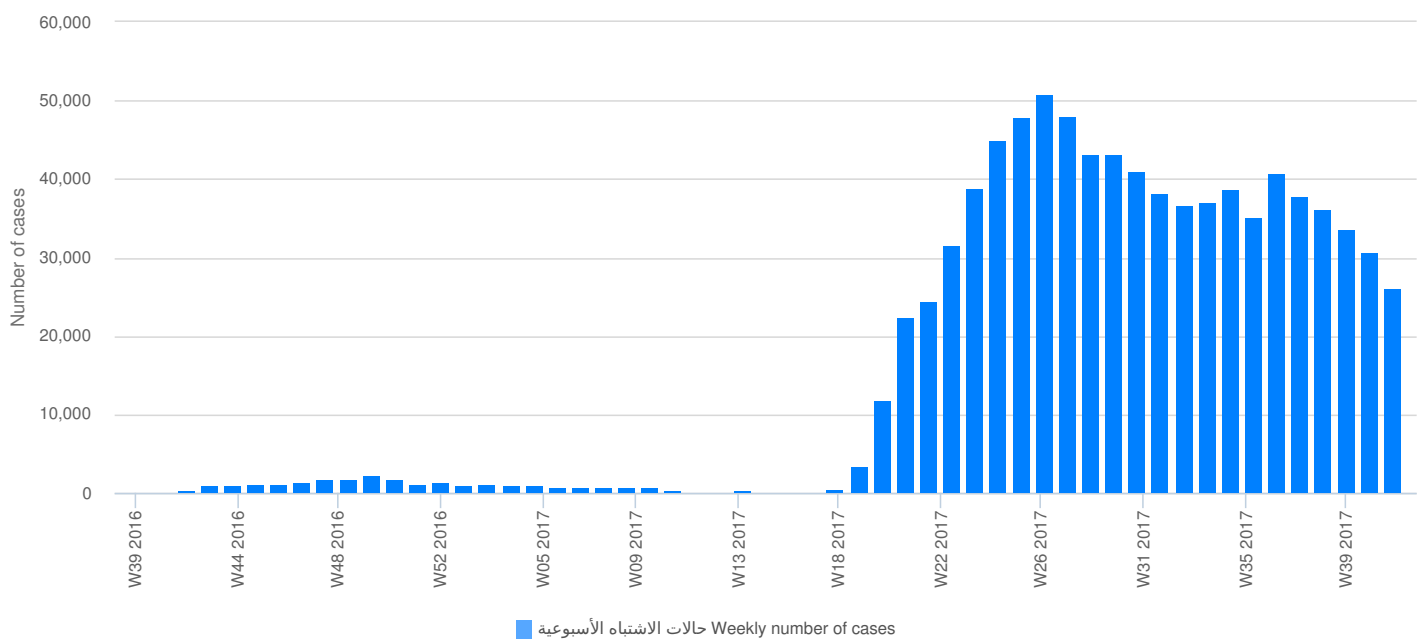
المديريات المتأثرة  
بالوباء  
Districts  
affected

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

## B. المنحنى الوبائي Epidemic curve

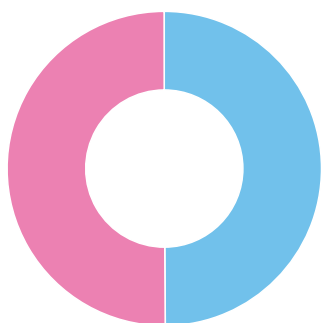
الشكل (1) المنحنى الوبائي على المستوى الوطني

Figure 1 | Epidemic curve (Country)



الشكل (2 أ) حالات الكوليرا على مستوى الجنس

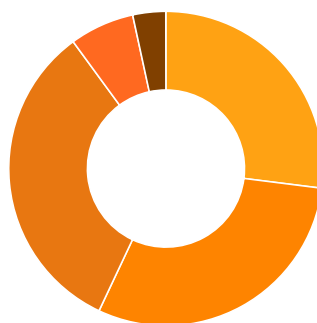
Figure 2a Cases by sex (Cumul.)



Male ( 50% ; n = 427,680 )  
Female ( 50% ; n = 428,279 )

الشكل (2 ب) حالات الكوليرا على مستوى الفئات العمرية

Figure 2b Cases by age (Cumul.)



< 5 ( 27.0% ; n = 221,797 )  
5-17 ( 30.0% ; n = 246,431 )  
18-44 ( 32.9% ; n = 270,567 )  
45-59 ( 6.7% ; n = 54,696 )  
≥ 60 ( 3.4% ; n = 27,832 )

الشكل (2 ج) حالات الكوليرا بالنسبة لحالة المريض

Figure 2c Cases by outcome (Cumul.)



Discharged ( 61.20% ; n = 516,536 )  
Referred ( 0.29% ; n = 2,437 )  
Died ( 0.26% ; n = 2,168 )  
Unknown ( 38.51% ; n = 325,073 )

## C. Key indicators by governorate الرئيسية حسب المحافظة

جدول (1) خلاصة بالمؤشرات الرئيسية بالنسبة للمحافظات

Table 1 | Summary of key cholera indicators by Governorate

المحافظات Governorate	تراكمي Cumulative (27/04/2017 to 15/10/2017)					الاتجاه 3 أسابيع 3 week trend				
	حالات الاشتباه Cases	الوفيات Deaths	معدل الاماته 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	82,587	169	0.20%	1,160,559	711.61	3,385	3,031	2,583	2,281	▼ -14%
Al Mahwit المحويت	48,391	142	0.29%	730,209	662.70	1,975	2,117	1,995	1,440	► -2%
Al Dhale'e الصالح	44,830	80	0.18%	731,496	612.85	1,623	1,440	1,371	999	► -7%
Abyan أبين	27,478	35	0.13%	570,832	481.37	1,145	581	507	303	▼ -32%
Sana'a صعاء	61,803	122	0.20%	1,470,346	420.33	1,726	2,125	2,139	1,906	► 7%
Hajjah حجة	92,376	408	0.44%	2,329,741	396.51	4,366	3,769	2,835	1,820	▼ -22%
Dhamar ذمار	75,644	156	0.21%	2,012,264	375.91	3,570	3,573	3,409	3,493	► -3%
Al Hudaydah الحديدة	119,647	262	0.22%	3,238,199	369.49	7,155	6,842	6,980	6,733	► 0%
Al Bayda البيضاء	24,424	29	0.12%	759,388	321.63	1,141	956	557	406	▼ -37%
Amanat Al Asimah العاصمة	81,447	67	0.08%	2,827,824	288.02	2,430	2,262	1,797	1,705	▼ -17%
Lahj لحج	22,358	20	0.09%	1,008,864	221.62	1,298	1,179	888	510	▼ -21%
Raymah ريمة	13,008	116	0.89%	606,776	214.38	424	448	371	399	▼ -10%
Al Jawf الجوف	12,353	21	0.17%	578,585	213.50	760	498	681	558	► 5%
Aden عدن	18,864	62	0.33%	922,996	204.38	445	393	369	336	► -8%
Ibb إب	53,232	278	0.52%	2,957,138	180.01	1,654	1,578	1,395	1,235	▼ -10%
Taizz تعز	50,288	183	0.36%	2,998,300	167.72	1,776	2,008	1,725	1,153	► -6%
Marib مأرب	5,380	7	0.13%	358,542	150.05	294	275	267	226	► -4%
Al Maharah المهرة	1,163	1	0.09%	153,306	75.86	3	0	1	0	▼ -25%
Sa'ada صعدة	6,825	5	0.07%	911,467	74.88	830	517	805	583	▲ +12%
Shabwah شبوثة	1,372	3	0.22%	636,008	21.57	52	50	15	34	▼ -62%
Mokklla المكلا	561	2	0.36%	774,430	7.24	60	43	27	16	▼ -38%
Say'on سينون	15	0	0.00%	654,921	0.23	0	0	0	1	■ Interrupt
<b>Yemen اليمن</b>	<b>844,046</b>	<b>2,168</b>	<b>0.26%</b>	<b>28,457,130</b>	<b>296.60</b>	<b>36,112</b>	<b>33,685</b>	<b>30,717</b>	<b>26,137</b>	<b>► -8%</b>

<sup>1</sup> معدل الاماته 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

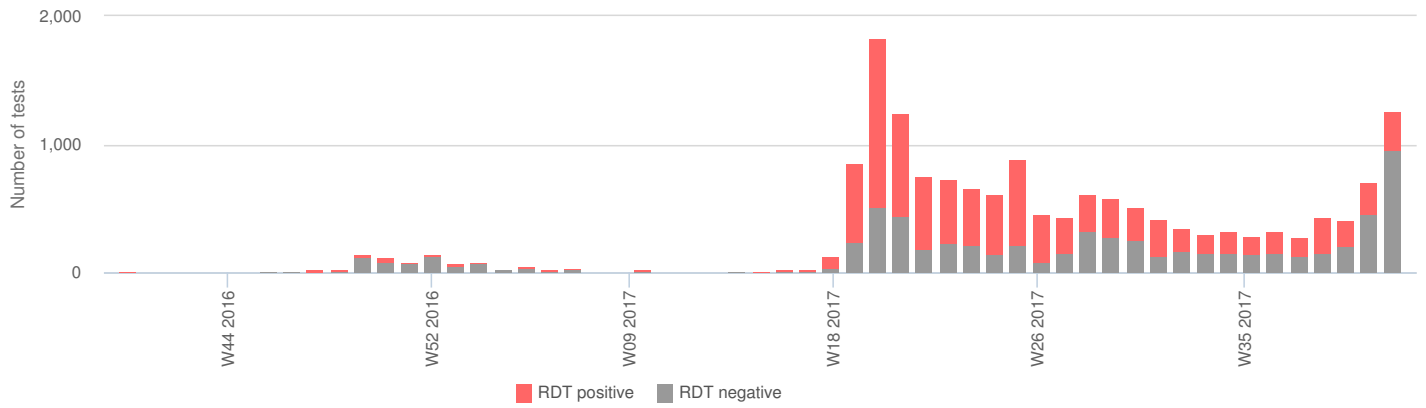


Figure 5 | Rapid Diagnostic Kit (RDT)

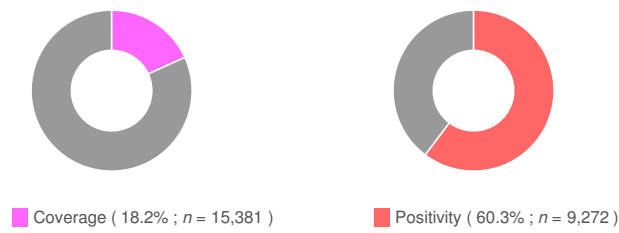


Figure 6 | Culture



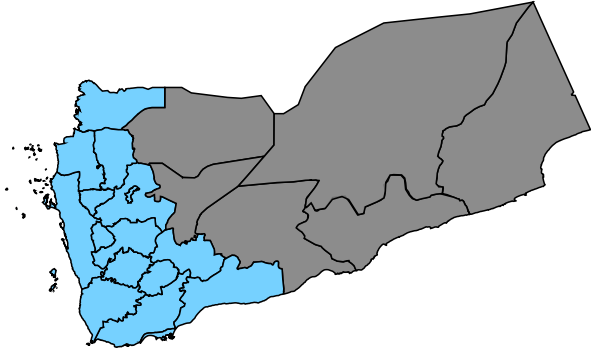
Table 2 | Summary of key laboratory indicators by Governorate

Governorate	Rapid Diagnostic Kit (RDT)					Culture			
	Cases	Total tested	Coverage	Total +ve	+ivity rate	Total tested	Coverage	Total +ve	+ivity rate
أبين أبين	27,478	192	7.0%	140	72.9%	36	25.7%	23	63.9%
Aden عدن	18,864	422	22.4%	297	70.4%	130	43.8%	101	77.7%
Al Bayda البيضاء	24,424	917	37.5%	595	64.9%	142	23.9%	9	6.3%
Al Dhale'e الضالع	44,830	221	4.9%	89	40.3%	23	25.8%	3	13.0%
Al Hudaydah الحديدة	119,647	721	6.0%	346	48.0%	85	24.6%	57	67.1%
Al Jawf الجوف	12,353	1242	100.5%	858	69.1%	46	5.4%	12	26.1%
Al Maharah المهرة	1,163	259	222.7%	114	44.0%	22	19.3%	14	63.6%
Al Mahwit المحويت	48,391	1101	22.8%	735	66.8%	33	4.5%	10	30.3%
Amanat Al Asimah أمانة العاصمة	81,447	3259	40.0%	1810	55.5%	361	19.9%	172	47.6%
Amran عمران	82,587	861	10.4%	527	61.2%	60	11.4%	22	36.7%
Dhamar ذمار	75,644	327	4.3%	235	71.9%	96	40.9%	21	21.9%
Hajjah حجة	92,376	539	5.8%	121	22.4%	33	27.3%	13	39.4%
Ibb إب	53,232	412	7.7%	322	78.2%	39	12.1%	12	30.8%
Lahj لحج	22,358	1107	49.5%	568	51.3%	35	6.2%	12	34.3%
Marib مأرب	5,380	151	28.1%	121	80.1%	2	1.7%	0	0.0%
Moklla المكلا	561	99	176.5%	75	75.8%	47	62.7%	29	61.7%
Raymah ريمة	13,008	548	42.1%	365	66.6%	27	7.4%	5	18.5%
Sa'ada صعدة	6,825	908	133.0%	750	82.6%	12	1.6%	0	0.0%
Sana'a صنعاء	61,803	1249	20.2%	514	41.2%	198	38.5%	43	21.7%
Say'on سيئون	15	14	933.3%	8	57.1%	9	112.5%	0	0.0%
Shabwah شبوة	1,372	119	86.7%	46	38.7%	42	91.3%	6	14.3%
Taizz تعز	50,288	713	14.2%	636	89.2%	375	59.0%	309	82.4%
<b>Yemen اليمن</b>	<b>844,046</b>	<b>15,381</b>	<b>18.2%</b>	<b>9,272</b>	<b>60.3%</b>	<b>1,853</b>	<b>20.0%</b>	<b>873</b>	<b>47.1%</b>

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

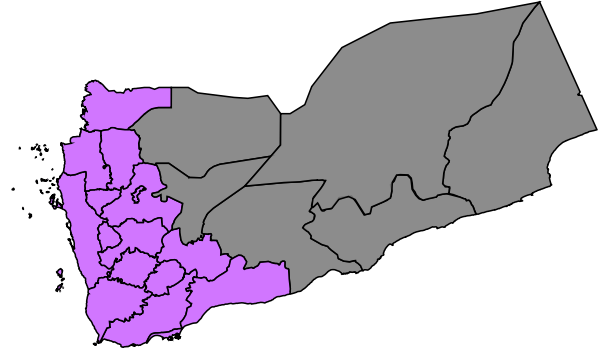
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



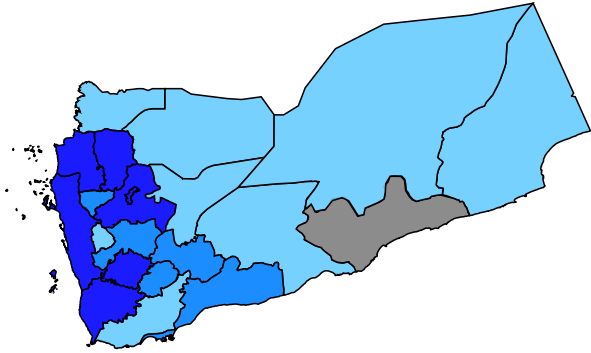
الخريطة (ب 1) معدل الإصابة للمحافظات

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



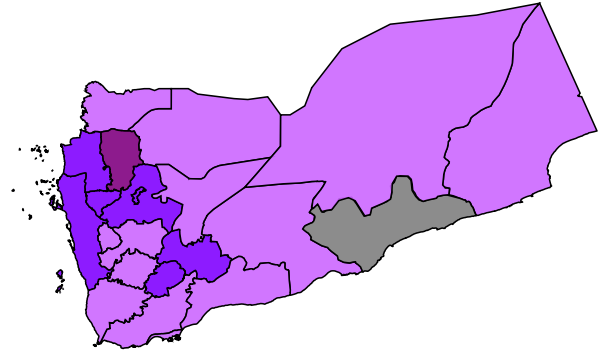
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



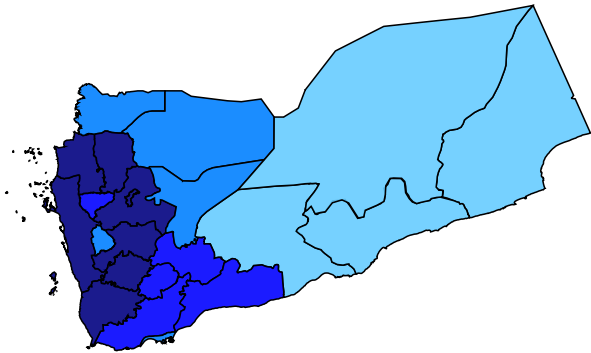
الخريطة (ب 1) معدل الإصابة للمحافظات

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



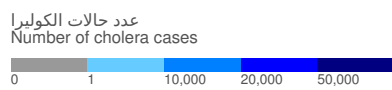
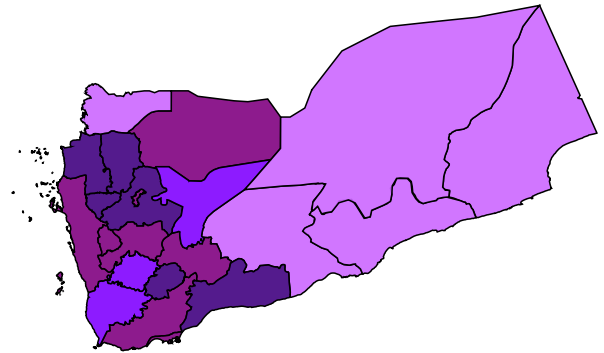
الخريطة (أ 1) عدد حالات الاشتباه للمحافظات

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



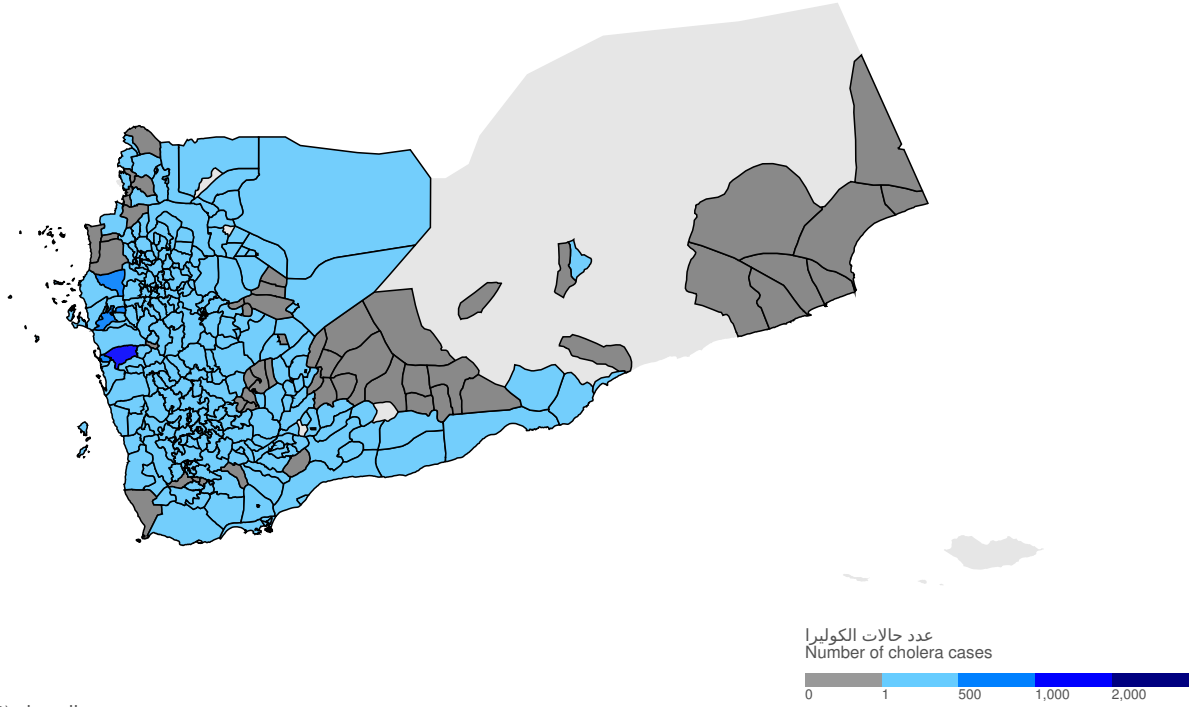
الخريطة (ب 1) معدل الإصابة للمحافظات

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

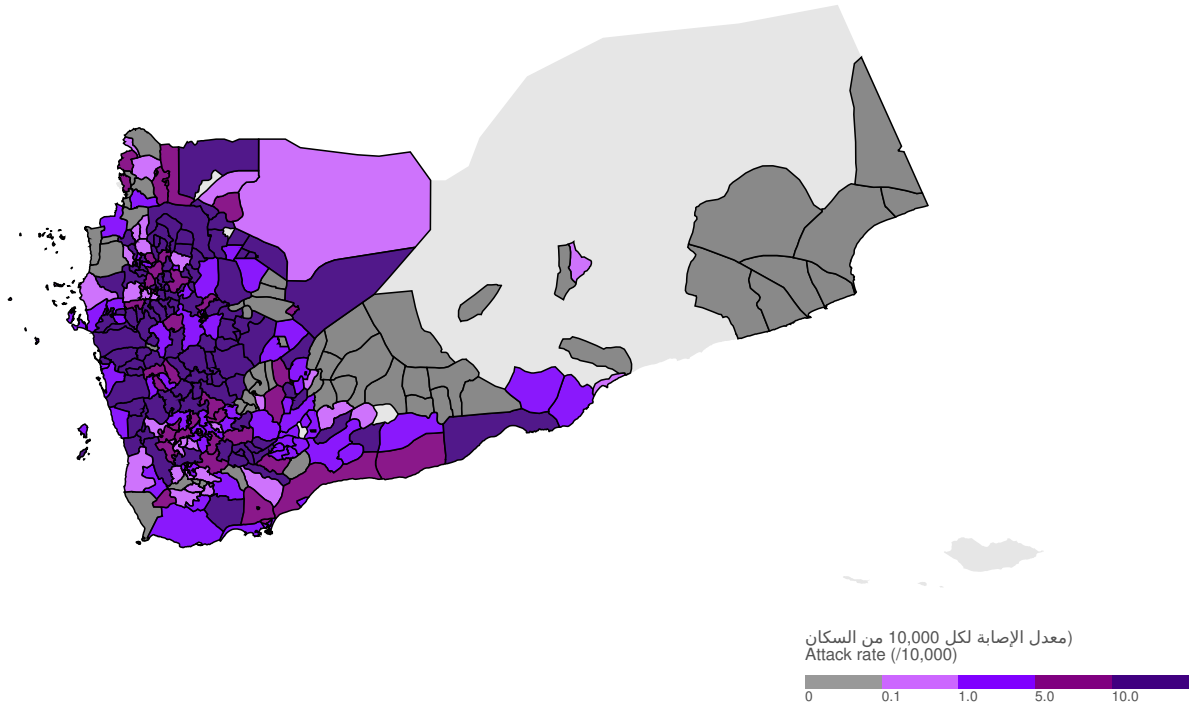


## F. المديريات ذات الأولوية Districts reporting in current week

الخريطة (2 أ) عدد حالات الاشتباه الأولوية  
Map 2 | Number of cases by district (W41 2017)



الخريطة (3 ب) معدل الإصابة الأولوية  
Map 3 | Attack rate by district (W41 2017)



## G. Epidemic curves by Governorate

Figure 3a | أبين Abyan

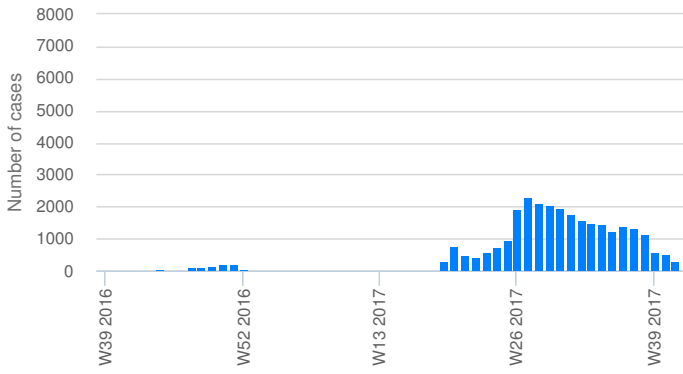


Figure 3b | عدن Aden

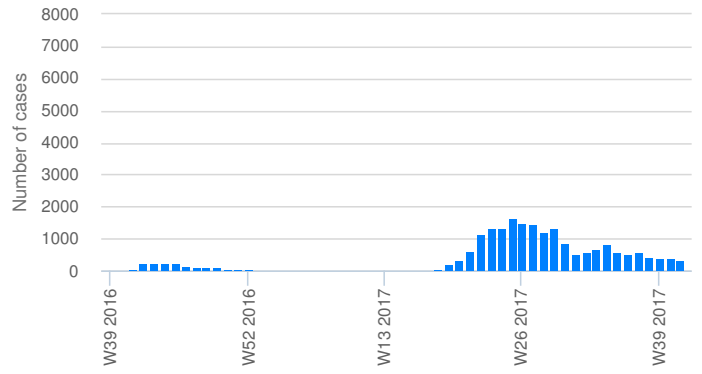


Figure 3c | البيضاء Al Bayda

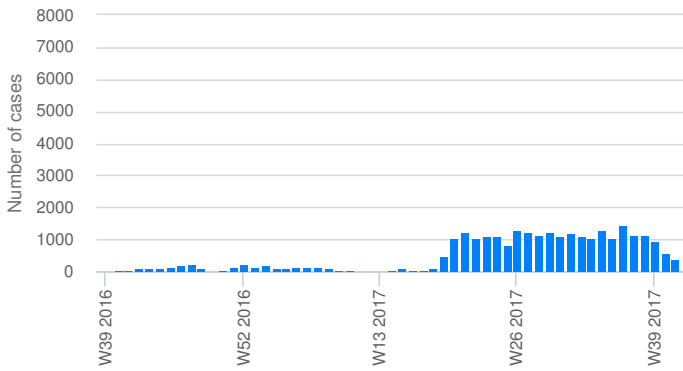


Figure 3d | الضالع Al Dhale'e

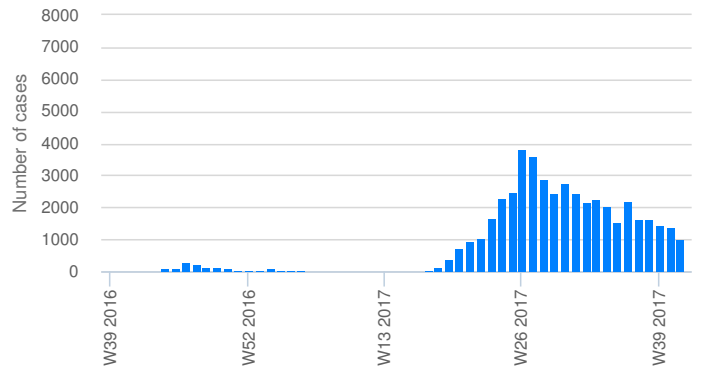


Figure 3e | الحديدة Al Hudaydah

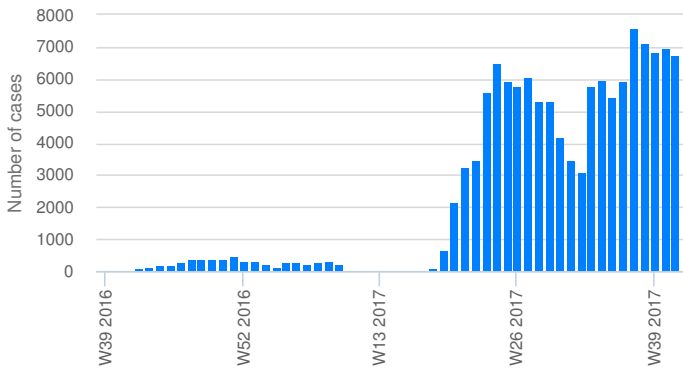


Figure 3f | الجوف Al Jawf

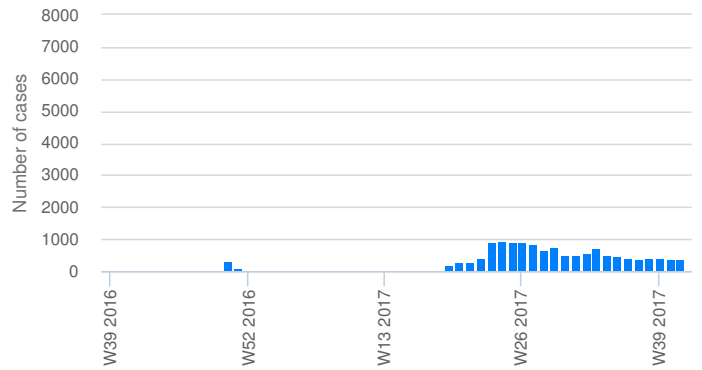


Figure 3g | المهرة Al Maharah

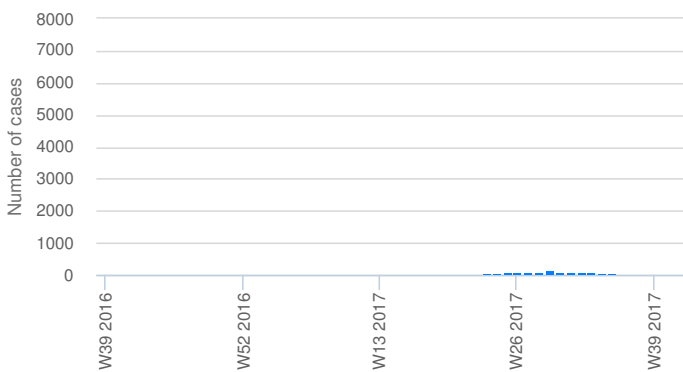


Figure 3h | المحويت Al Mahwit

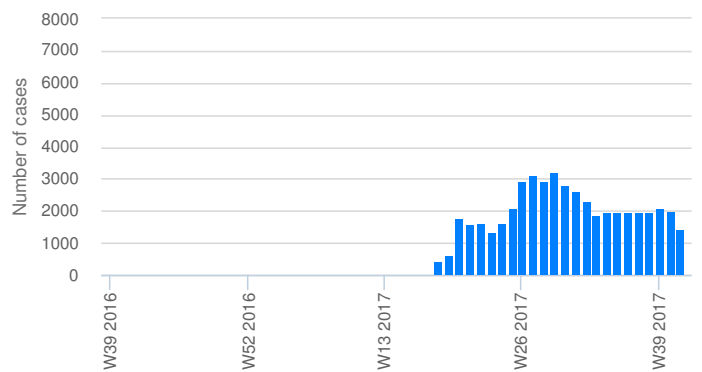


Figure 3i | Amanat Al Asimah أمانة العاصمة

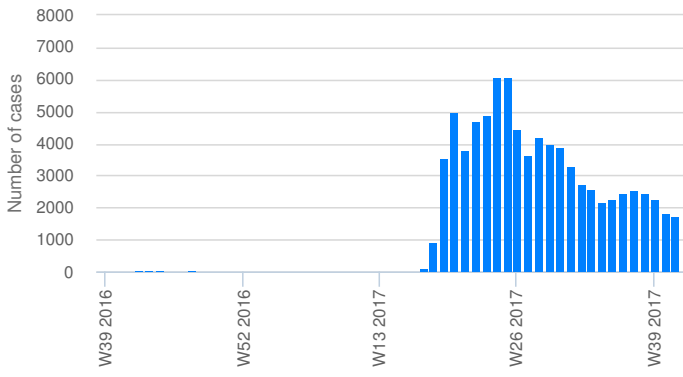


Figure 3j | Amran عمران

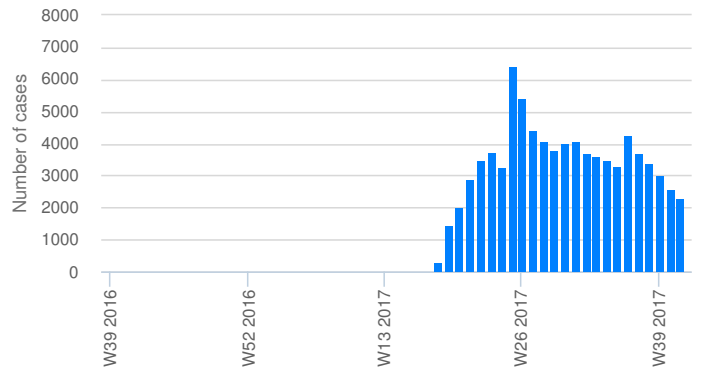


Figure 3k | Dhamar ذمار

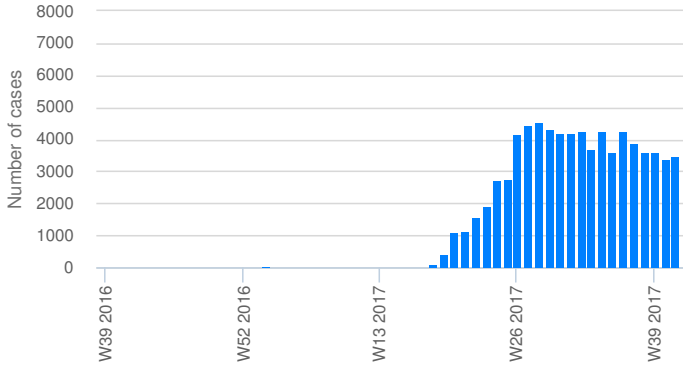


Figure 3l | Hajjah حجة

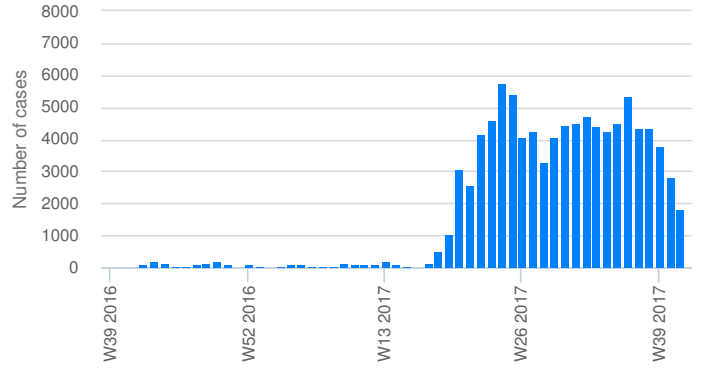


Figure 3m | Ibb إب

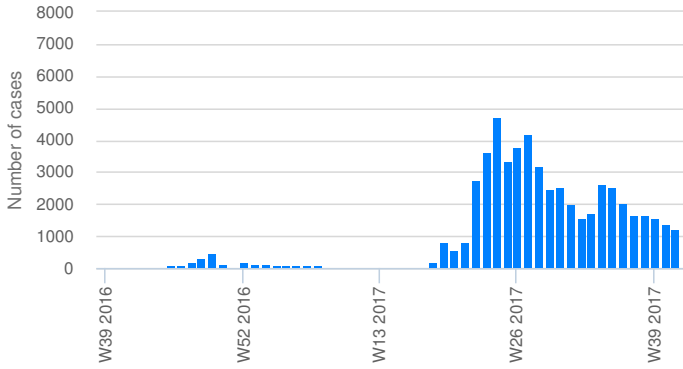


Figure 3n | Lahj لبح

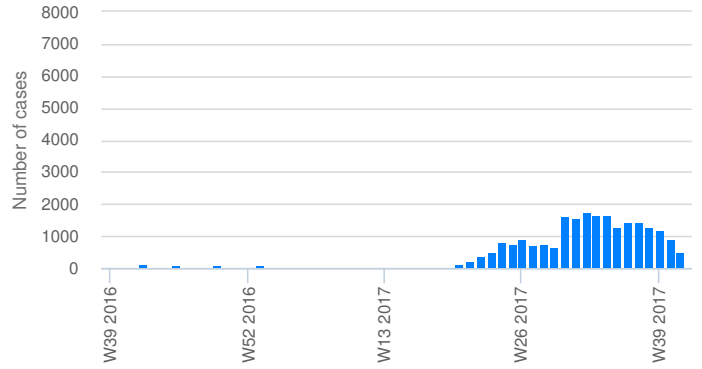


Figure 3o | Marib مأرب

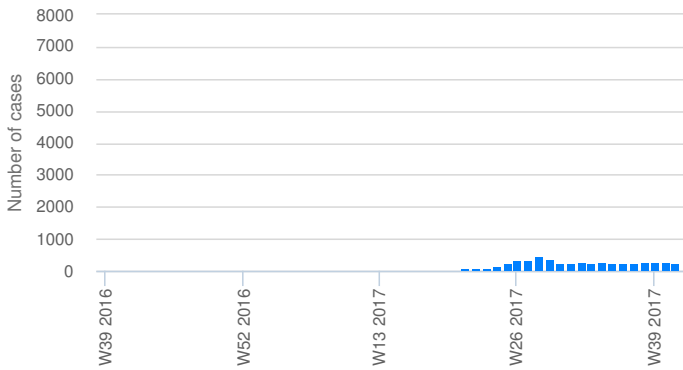


Figure 3p | Raymah ريمة

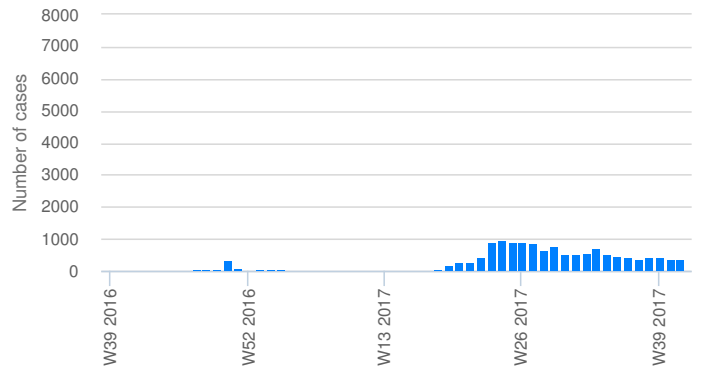




Figure 3q | Sa'ada صعدة

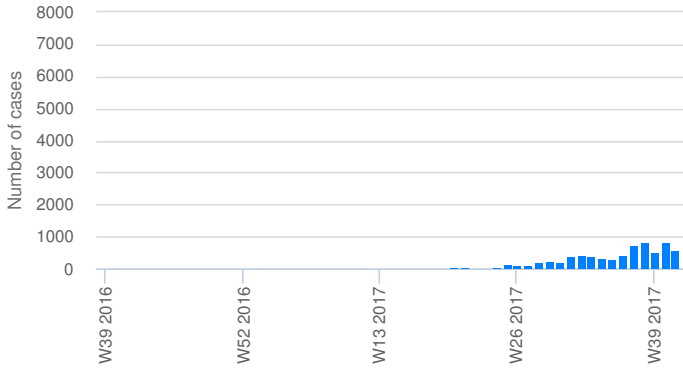


Figure 3r | Sana'a صنعاء

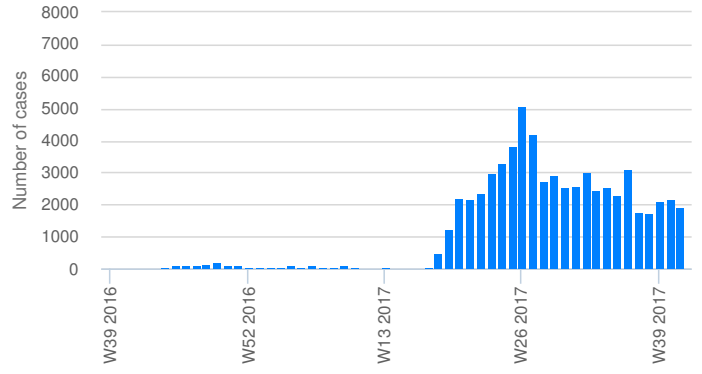


Figure 3s | Say'on سينون

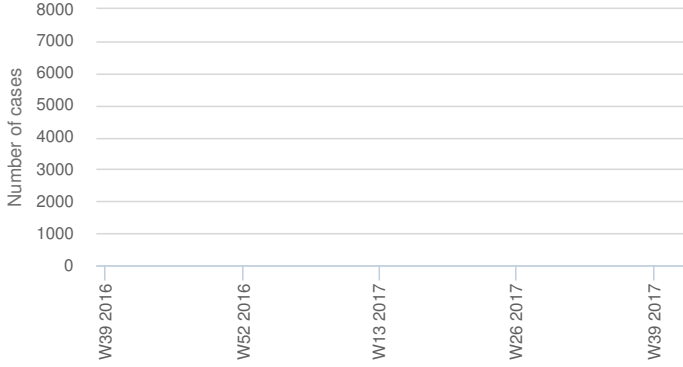


Figure 3t | Shabwah شبوة

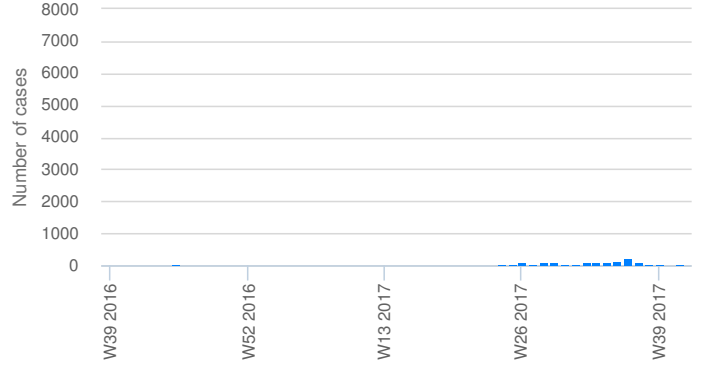
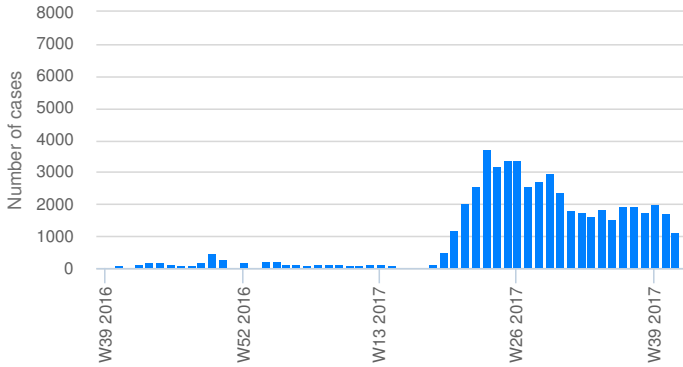


Figure 3v | Taizz تعز



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>



**World Health Organization**