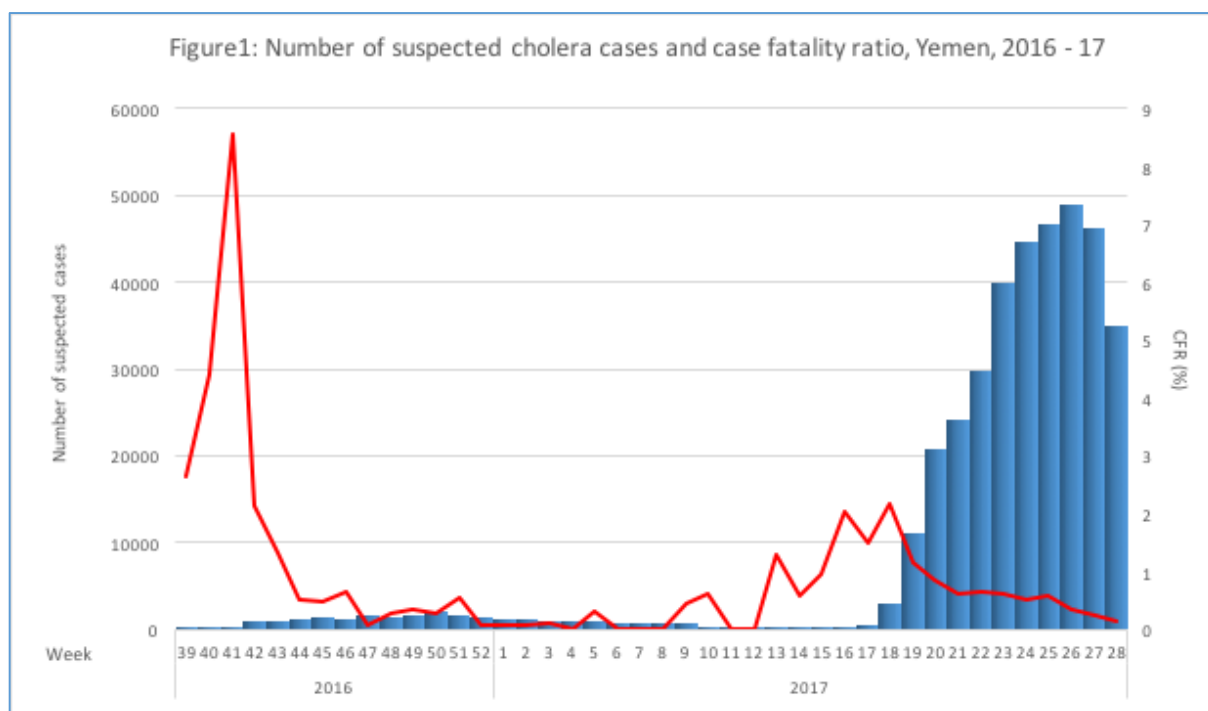


Highlights

- During week 28 (from 9 to 15 July 2017), **35 052 suspected cholera cases and 53 deaths** were reported in Yemen.
- Since the beginning of the second wave of the outbreak (from 27 April to 16 July 2017), **351,045 suspected cholera cases, and 1 790 deaths** (CFR: 0.5%) have been reported.
- Twenty-one of the country 23 governorates (91.3%) and 88.0% of the districts (293/333) have reported suspected cases since the start of the second wave.
- The **overall decline** of suspected cases reported in the last weekly (i.e. week 27) bulletin is **confirmed**. This decline is reflected in several of the most affected governorates (e.g. Amanat Al Asimah, Amran or Sana'a). The decline started from week 27 and continues in week 28, however the sharp decline in week 28 should be interpreted with caution given the remaining back log cases.



Geographical distribution of cases

The five most affected governorates were Amanat Al Asimah, Al Hudaydah, Hajjah, Amran and Ibb with 53.9% (189 375/351 045) of the cases reported **since 27 April 2017**. Al Dhale'e governorate had the highest attack rate (26.1‰), followed by Al Mahwit and Amran governorates (25.3‰ and 23.6‰ respectively) (see table 1 and figure 2).

Table 1: Number of cholera cases and attack rate by governorate, Yemen, 27 April – 16 July 2017

Governorate	Cases	Attack Rate (‰)
Amanat Al Asimah	45 701	13.8
Al-Hudaydah	42 813	12.8
Hajjah	37 647	17.0
Amran	36 116	23.6
Ibb	27 098	8.8
Sana'a	25 414	20.3
Taizz	24 656	8.1
Dhamar	24 279	11.4
Al Dhale'e	19 659	26.1
Al Mahwit	19 278	25.3
Aden	10 665	11.1
Al Bayda	10 606	13.8
Abyan	10 001	16.4
Raymah	6 416	10.1
Lahj	4 540	4.3
Al_Jawf	2 869	4.4
Ma'areb	1 783	5.0
Sa'ada	696	0.8
AL Mahrah	499	3.1
Shabwah	303	0.5
Say'on	6	0.0
Total	351 045	11.8

During week 28, 35 052 suspected cases and 53 deaths of cholera were reported in 21 governorates and 263 districts (see table 2). The highest numbers of cases were reported in Dhamar, Al Hudaydah and Amran governorates, and in the districts of Khanfir (Abyan gov., 974 cases, 1 death), Utmah (Dhamar gov., 780 cases, 4 deaths) and Wusab Al Ali (Dhamar gov., 757 cases, 1 death).

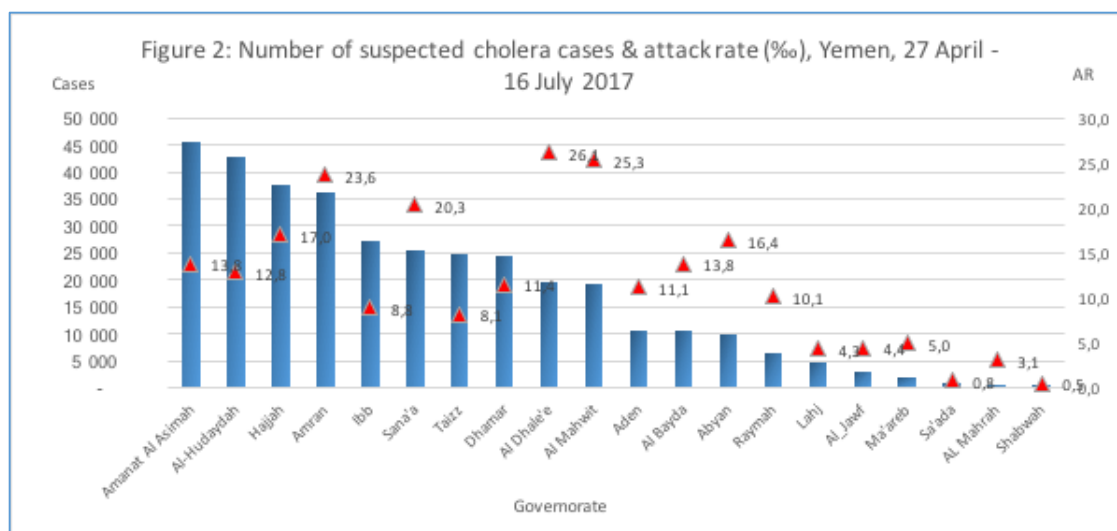
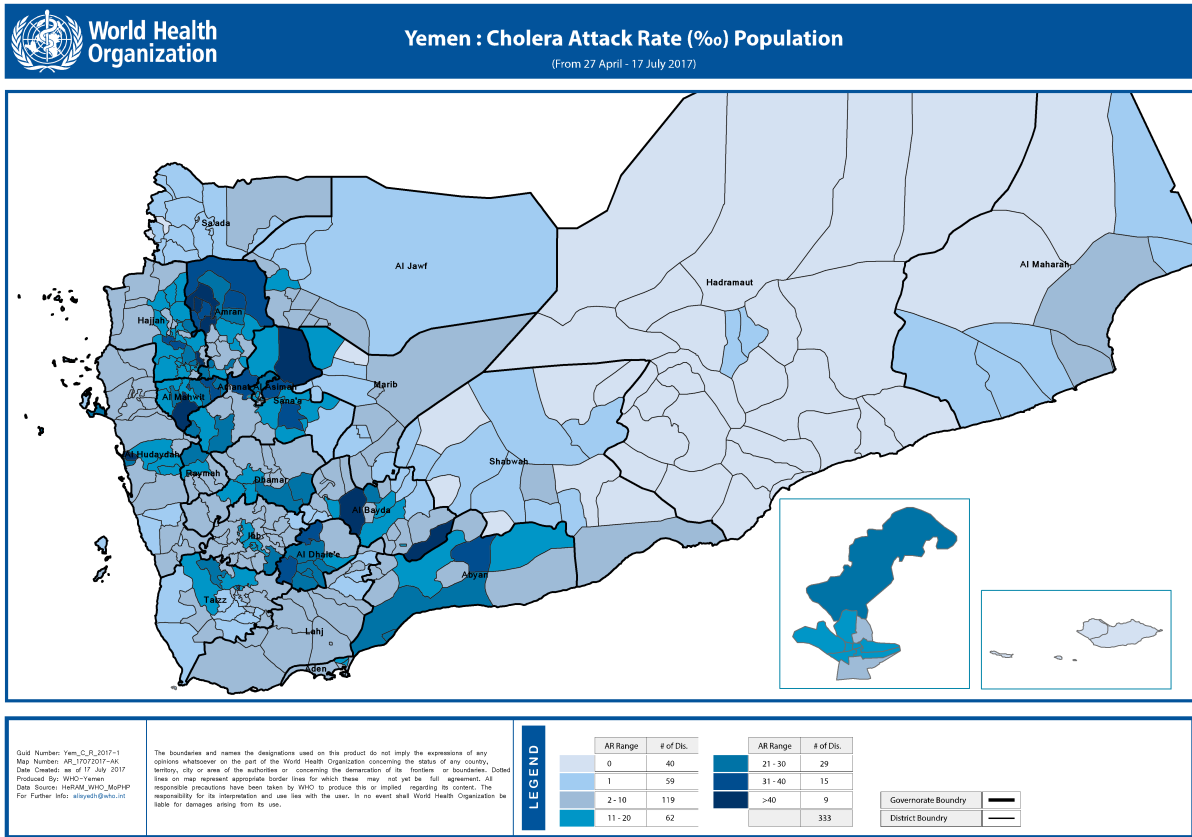


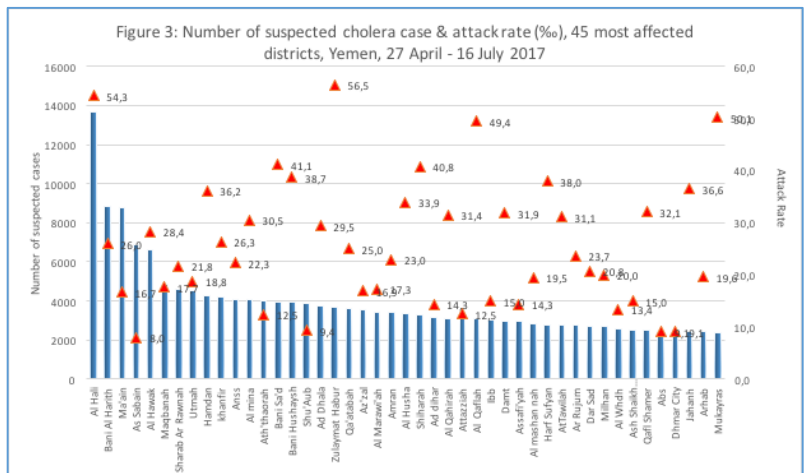
Table 2: Number of cholera cases and deaths by governorate, Yemen, week 28 - 2017

Governorate	Cases	Deaths
Dhamar	4 232	6
Al-Hudaydah	3 629	7
Amran	3 528	-
Amanat Al Asimah	3 144	3
Al Dhale'e	2 995	2
Al Mahwit	2 640	3
Hajjah	2 515	7
Taizz	2 286	9
Ibb	2 255	6
Abyan	1 899	3
Sana'a	1 512	3
Aden	1 284	-
Al Bayda	1 110	-
Raymah	637	4
Al_Jawf	499	-
Ma'areb	394	-
Sa'ada	181	-
AL Mahrah	118	-
Lahj	113	-
Shabwah	79	-
Say'on	2	-
Total	35 052	53

This map shows the suspected cholera attack rate (%) per district

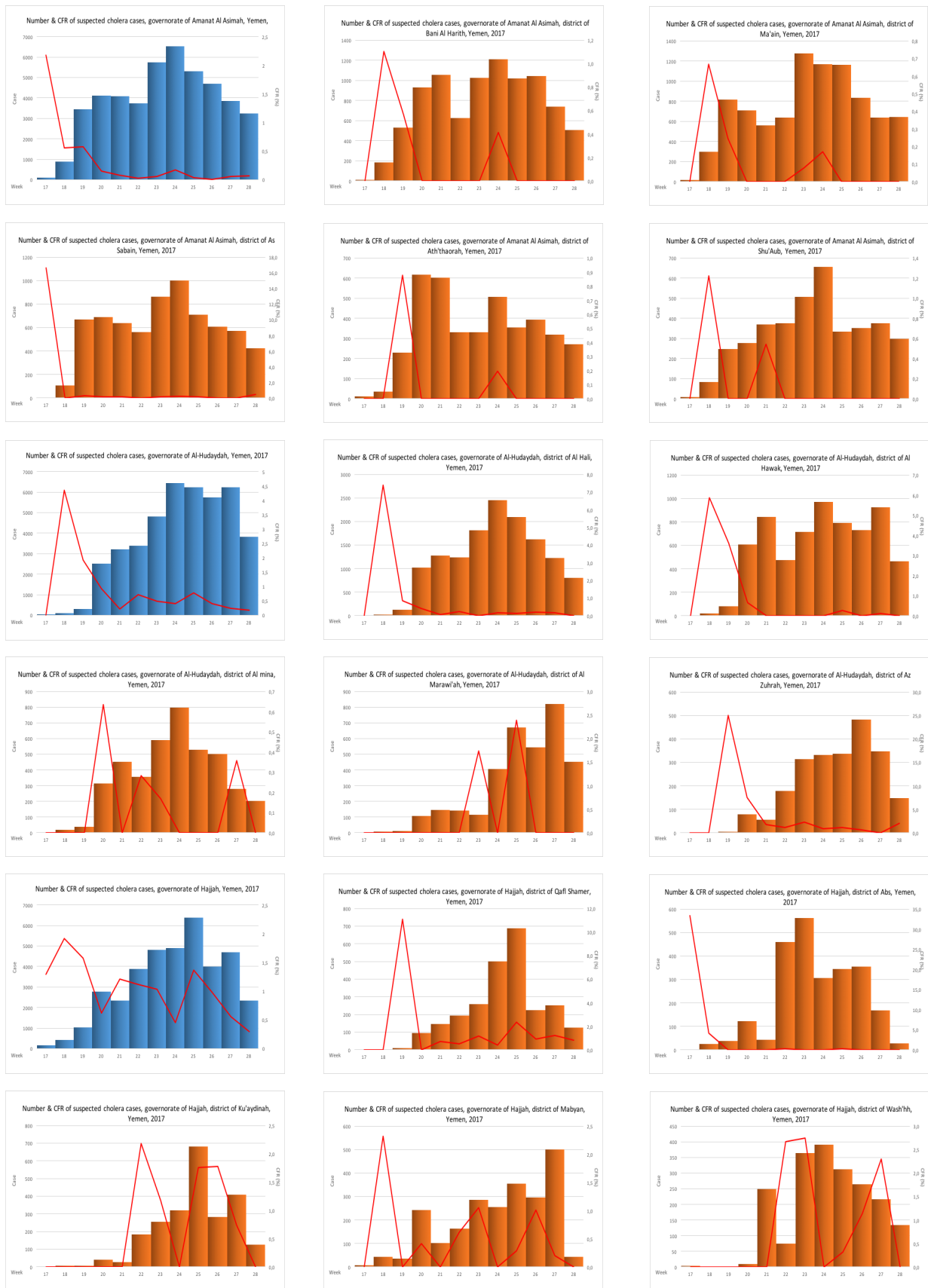


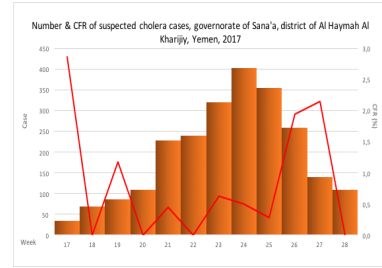
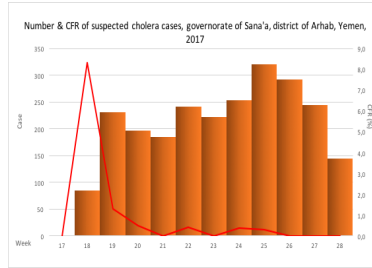
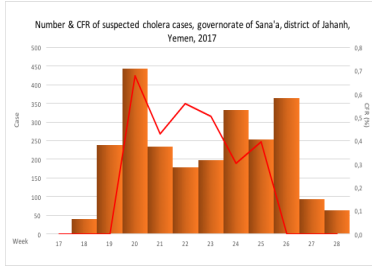
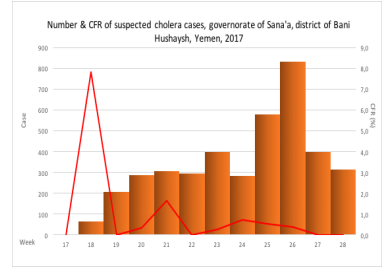
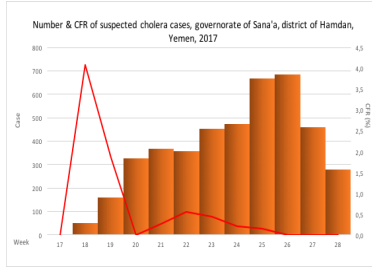
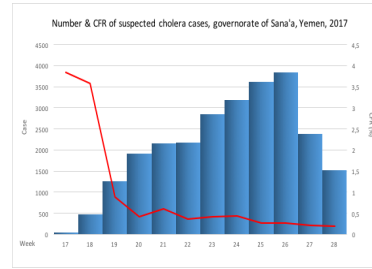
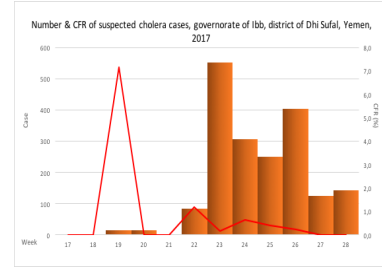
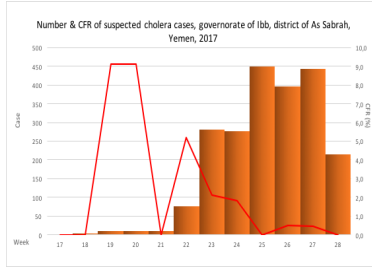
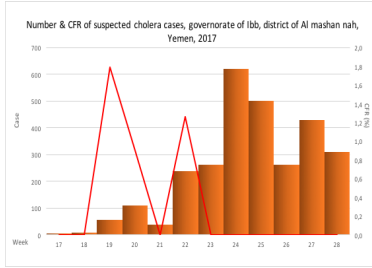
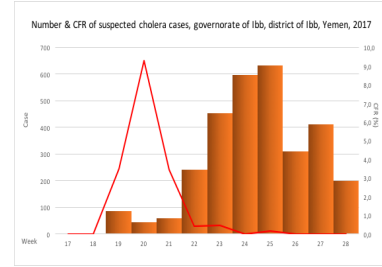
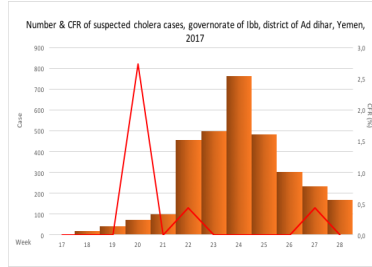
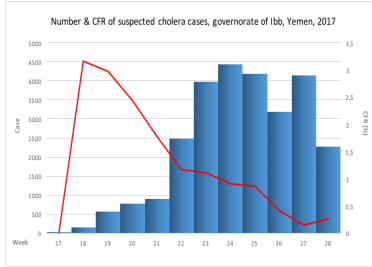
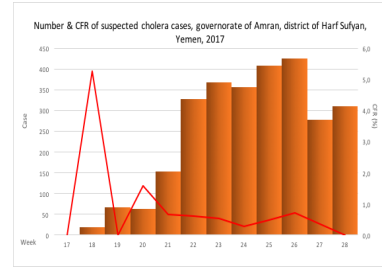
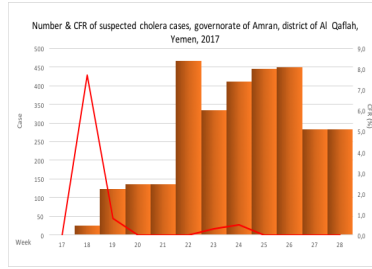
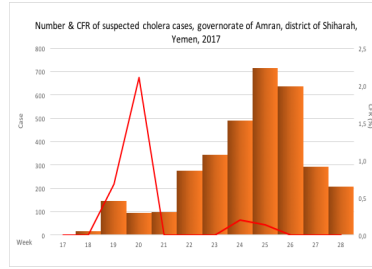
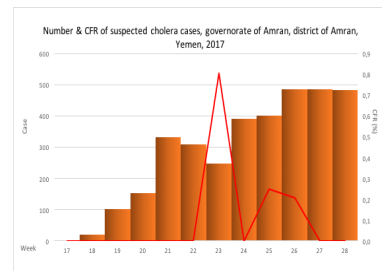
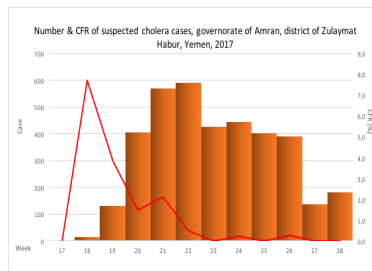
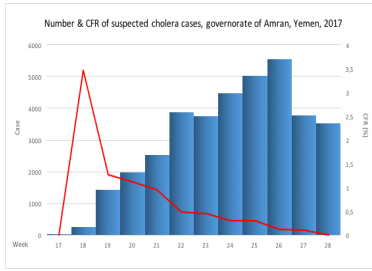
Since 27 April 88.0% of all districts (293/333) have been affected. Figure 3 shows the 45 most affected districts where 50.8% (176 966/348 423)¹ of the cases have been reported. The highest number of cases were reported in Al Hali (Al Hudaydah gov., 13 680 cases, 23 deaths), Bani Al Harith (Amanat Al Asimah gov., 8 867 cases, 10 deaths), Ma'a'in (Amanat Al Asimah gov., 8 758 cases, 7 deaths), As Sabain (Amanat Al Asimah gov., 6 854 cases, 11 deaths) and Al Hawak (Al Hudaydah gov., 6 620 cases, 11 deaths). Zulaymat Habur (Amran gov.) and Al Hali (Al Hudaydah gov.) had the highest attack rates (respectively 56.5% and 54.3%).



¹ 2 622 missing values

Figure 4: Epidemic curves of most affected governorates and districts, Yemen, weeks 17 - 28 2017



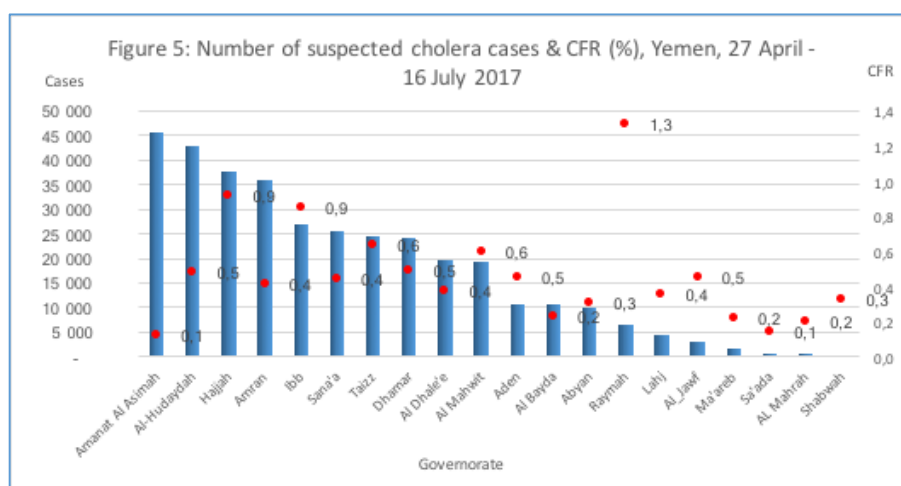


Case fatality ratio, and age and sex distribution

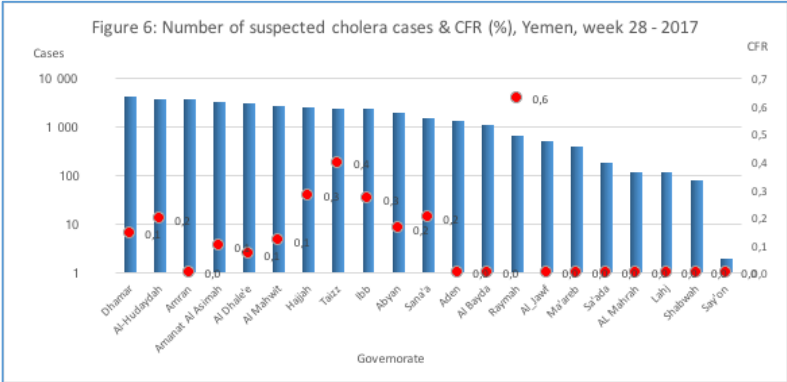
Table 3: Number of cholera cases and case fatality ratio (CFR), Yemen, 27 April – 16 July 2017

Governorate	Number of cases	Proportion of cases (%)	Number of deaths	CFR (%)
Amanat Al Asimah	45 701	13.0	57	0.1
Al-Hudaydah	42 813	12.2	206	0.5
Hajjah	37 647	10.7	345	0.9
Amran	36 116	10.3	149	0.4
Ibb	27 098	7.7	231	0.9
Sana'a	25 414	7.2	113	0.4
Taizz	24 656	7.0	157	0.6
Dhamar	24 279	6.9	119	0.5
Al Dhale'e	19 659	5.6	74	0.4
Al Mahwit	19 278	5.5	115	0.6
Aden	10 665	3.0	48	0.5
Al Bayda	10 606	3.0	24	0.2
Abyan	10 001	2.8	31	0.3
Raymah	6 416	1.8	85	1.3
Lahj	4 540	1.3	16	0.4
Al_Jawf	2 869	0.8	13	0.5
Ma'areb	1 783	0.5	4	0.2
Sa'ada	696	0.2	1	0.1
AL Mahrah	499	0.1	1	0.2
Shabwah	303	0.1	1	0.3
Say'on	6	0.0	-	-
Total	351 045	100.0	1 790	0.5

From 27 April to 16 July, the overall case fatality ratio (CFR) was 0.5 % (1 790/351 045). The highest CFR was reported in Raymah governorate (1.3%) (see table 3 and figure 5).



For the period of week 28, the overall CFR was 0.2% (53/35 052) and was the highest in Raymah governorate (0.5%, 4/637) (see figure 6, main y axis is logarithmic).



The male/female sex ratio was 0.9. The highest proportion of cases was still seen in the 15-29 year age group (i.e. 27.4%). The proportion of under-five y.o. cases has increased to 19.6%. Patients aged under 18 years old were 48.4% of the total. People over 60 years old were more at risk of dying (CFR: 2.6%), followed by cases in the 45-60 year age group (CFR: 1.0%) (see table 4). CFR was slightly higher in male than in female cases (respectively 0.6% and 0.5%).

Table 4: Distribution of cholera cases and deaths by age, Yemen, 27 April – 16 July 2017

Age (y.o.)	Cases				Deaths			
	Male	Female	Total*	% of cases	Male	Female	Total**	CFR (%)
< 5	37 407	31 142	68 549	19.6	165	118	283	0.4
5 - 14	42 443	37 903	80 346	23.0	139	134	273	0.3
15 - 29	40 262	55 476	95 738	27.4	68	95	163	0.2
30 - 44	23 500	32 286	55 786	16.0	104	133	237	0.4
45 - 59	11 552	15 132	26 684	7.6	136	124	260	1.0
≥ 60	10 253	11 581	21 834	6.3	287	271	558	2.6
Total	165 417	183 520	348 937	100.0	899	875	1 774	0.5
*2 108 missing values					**16 missing values			

For further information:

Dr Ahmed Zouiten
 Senior Emergency Health Adviser
 Phone: +41 79 475 5532; +967730044449
 E-mail: zouitena@who.int

Lauren O'Connor
 Communication officer
occonnorl@who.int

Note: This bulletin is released once a week. A shorter update is proposed daily. You can find them on EMRO [website](#).