



Donkey cart carrying water in Marka

Photo: WHO

December 2008
 Lower Shabelle Region

This document is generated from the Early Warning and Response System (EWARS) which is built on surveillance data that health service providers transmit on a weekly basis to the Ministry of Health of Somalia and WHO from health facilities and hospitals in Lower Shabelle region.

The Monthly Morbidity and Mortality Bulletin (MMMB) reflects the health conditions reported by the facilities trained and participating in EWARS. The MMMB does not reflect the situation from other health facilities.

Highlights

- In the month of December (epidemiological weeks 48-52), a total of 20,396 consultations, including 38 deaths, were reported from Lower Shabelle.
- Of the 35 reporting units participating in EWARS in Lower Shabelle region, 97% (34) reported a total of 4,462 consultations in epidemiological week 52 (27 December 2008 – 2 January 2009).
- In the same period, 32 Malaria (MAL) cases reported. Of them, 78% were laboratory confirmed using a rapid diagnostic test.
- Of the 10 deaths reported in epidemiological week 52, 2 were MAL-related, 2 were DD-related, 1 was INJ-related, and the remaining 5 were due to other causes (OTH).
- Overall, **23%** (866) of all consultations were due to Acute Respiratory Infections (ARI) and **9%** (346) due to Diarrhoeal Disease (DD).
- The trend of ARI showed a decrease by 9% in epidemiological week 52 comparing with the previous week.
- In epidemiological week 52, **349** cases of AWD with **2** related deaths were reported (CFR 0.57%). There was **1%** increase in the number of reported cases compared to the previous epidemiological week.
- Between 13 August and 31 December 2008, a total of **688** cases of acute watery diarrhoea, including **8** related-deaths (CFR: **1.17%**) were reported from Marka hospital; 17 out of 22 stool samples tested positive for *V. cholerae*, serogroup 01, serotype *Inaba*.

In this issue

- ✓ EWARS Data, Epidemiological Week 52, 2008;
- ✓ Detailed epidemiological analysis of the past five epidemiological weeks (48-52 inclusive);
- ✓ Figures showing the trends of diarrhoeal diseases per district in Lower Shabelle region;
- ✓ Laboratory confirmed cholera cases in Marka Hospital.

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This update has been made possible with the support of:



1 Reporting Units

The total population under EWARS surveillance in Lower Shabelle region is estimated at **845,651**.

In total, 35 reporting units have been trained for EWARS in Lower Shabelle. Of them, 34 have sent their surveillance data on time during the epidemiological week 52¹ (27 December 2008 - 2 January 2009). (Table 1).



EWARS training in Marka to increase the reporting units

Table 1: Number of reporting units by district, Lower Shabelle, 29 November 2008 – 2 January 2009.

District	Population ²	No. reporting sites/epidemiological weeks				
		Week 48	Week 49	Week 50	Week 51	Week 52
Afgooye ³	135 012	2	1	3	4	4
Awdheegle	76 700	3	3	3	3	3
Brava	57 652	3	3	3	3	3
Katunwary	50 445	5	5	5	5	5
Marka ⁴	192 939	14	14	14	14	13
Qoryole	134 205	4	4	4	4	4
Sablale	43 055	1	1	1	1	1
Wanleweyne	155 643	1	1	1	1	1
TOTAL	845 651	33/33	32/33	34/34	35/35	34/35
Percentage %		100%	97%	100%	100%	97%

Since the start of the EWARS in the epidemiological week 21 (24 May 2008), a total of **96,308** consultations were reported through the Early Warning and Response System from Lower Shabelle Region. The weekly number of consultations and reporting units per district are shown in Figure 1.

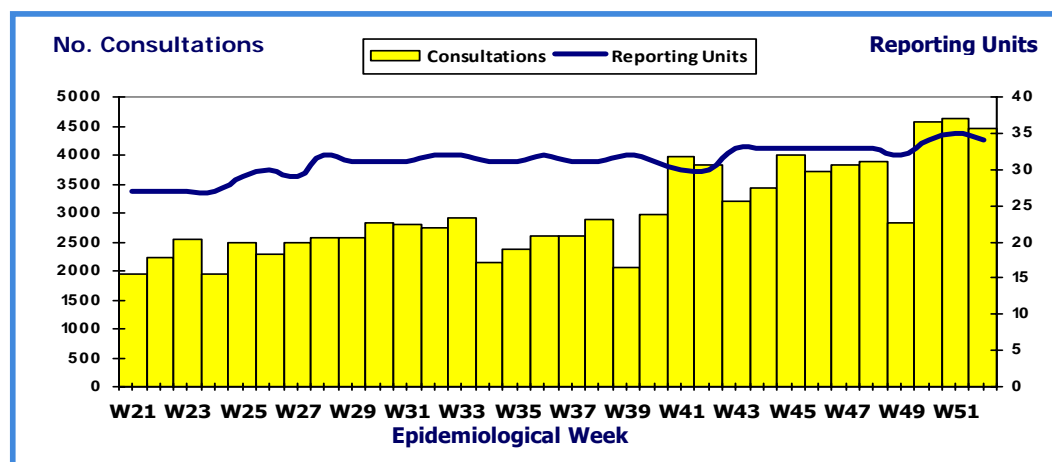


Figure 1: Number of reporting health facilities by week, Lower Shabelle region, 24 May 2008 - 2 January 2009.

¹ The epidemiological weeks were adapted for 2008

² Source: UNDP Somalia

³ Two additional health facilities were trained and participated in EWRAS in Afgooye district in the epidemiological weeks 50 and 51.

⁴ One additional health facility was trained and participated in the EWRAS in Marka district in the epidemiological week 43.

2 Surveillance Data of Epidemiological Week 52, 2008

Between 29 November 2008 and 2 January 2009 (epidemiological week 52), a total of **4,462** consultations were reported through EWARS in Lower Shabelle region. Overall, in all age groups, **21%** (948) were due to Acute Respiratory Infections (**ARI**), **8%** (349) to diarrhoeal diseases (**DD**), **4%** (157) to injuries (**INJ**), **2%** (92) to Unexplained Fever (**UXF**), **1%** (57) to severe malnutrition (**SMN**), and **1%** (46) due to Malaria (**MAL**).

ARI represented **27%** in the group of less than 5 years and **18%** in the group of 5 years and above. **DD** was found to be higher in those less than 5 years and represented **12%** of primary causes of morbidity in this age group, and 5% in the age group of 5 years and above. In the same period, **10** deaths were reported; of them **2** were **DD**-related, **2** were **MAL**-related, **1** was **INJ**-related, and the remaining **5** were due to **OTH**.

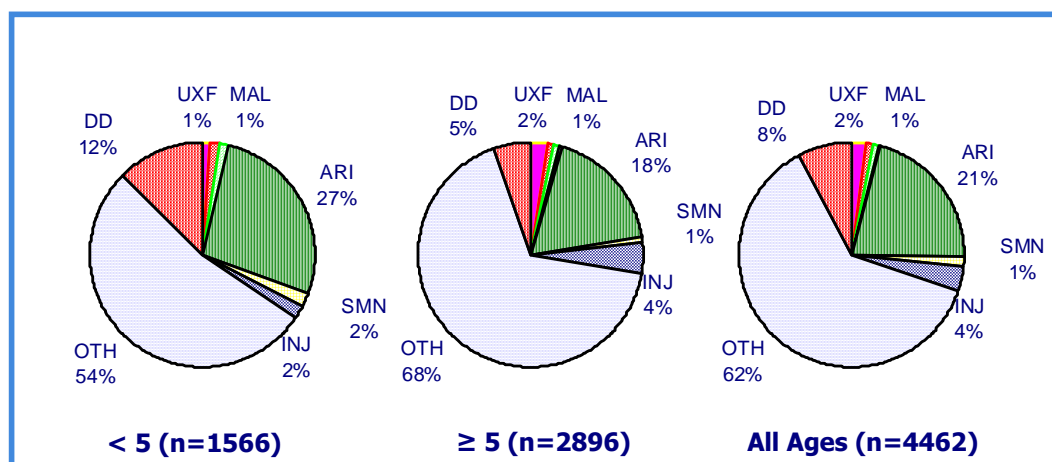
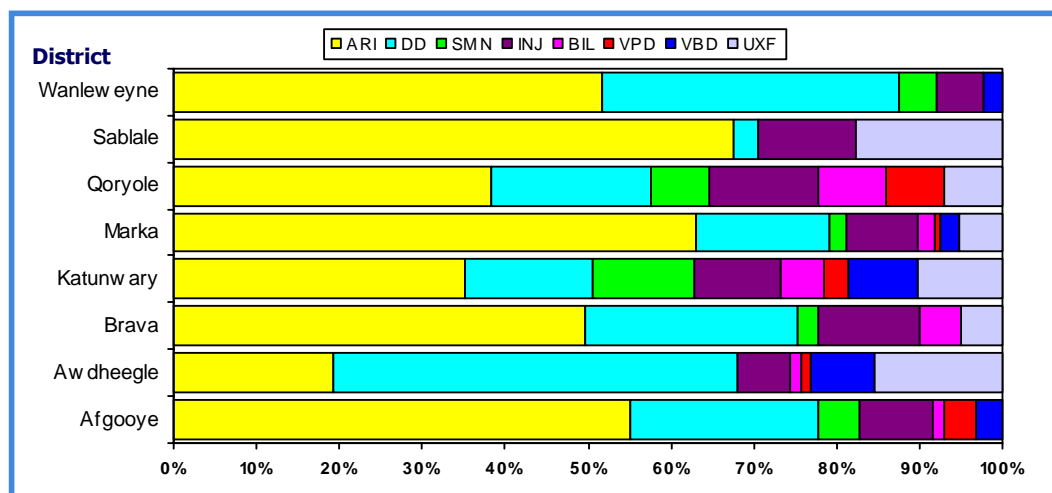


Figure 2: Proportion of primary causes for all reported cases, Lower Shabelle region, Somalia, 29 November 2008 - 2 January 2009.

Figure 3 shows that **ARI** and **DD** are the most prevalent of communicable diseases throughout the region; **MAL** is predominant in Katunwary and Awdheegle districts, while Bilharzia is present in Qoryole, Marka, Katunwary, and Brava Districts. **VPD** mainly occur in Qoryole, Katunwary, and Brava districts. The highest rate of **SMN** is reported from Katunwary, followed by Qoryole and Afgooye districts. **UXF** is most common in Sablale and Awdheegle districts.



DD – Diarrhoeal Diseases, ARI - Acute Respiratory Infection, VPD - Vaccine Preventable Diseases, VBD - Vector Borne Diseases, SMN - Severe Malnutrition, INJ – Injuries, BIL - Bilharzia, UXF – Unexplained fever.

Figure 3: Distribution of reported health events by district, Lower Shabelle region, Somalia, 29 November 2008 - 2 January 2009.

2.1 Distribution of reported cases and case fatality rate (CFR⁵) by age group in Epidemiological Week 52

Between 29 November 2008 and 2 January 2009, **1,566** consultations were reported in the age group of less than 5 years, constituting **35%** of the total number of consultations. **27%** (420) of cases were attributed to **ARI**, while **12%** (195) were due to **DD**. Injuries (**INJ**) and unexplained fever (**UXF**) contributed only **2%** and **1%** of the total consultations respectively. 11 cases of whooping cough (**WCO**) were reported; 64% (9) of them from Qoryole district. 2 cases of acute jaundice syndrome (**JAU**) were reported; one from Marka and 1 from Qoryole district. Of the **10 deaths** reported in epidemiological week 52, **4** (40%) occurred among children under 5 years of age: 2 **Mal**-related, 1 **DD**-related, and 1 due to OTH (Figure 4).

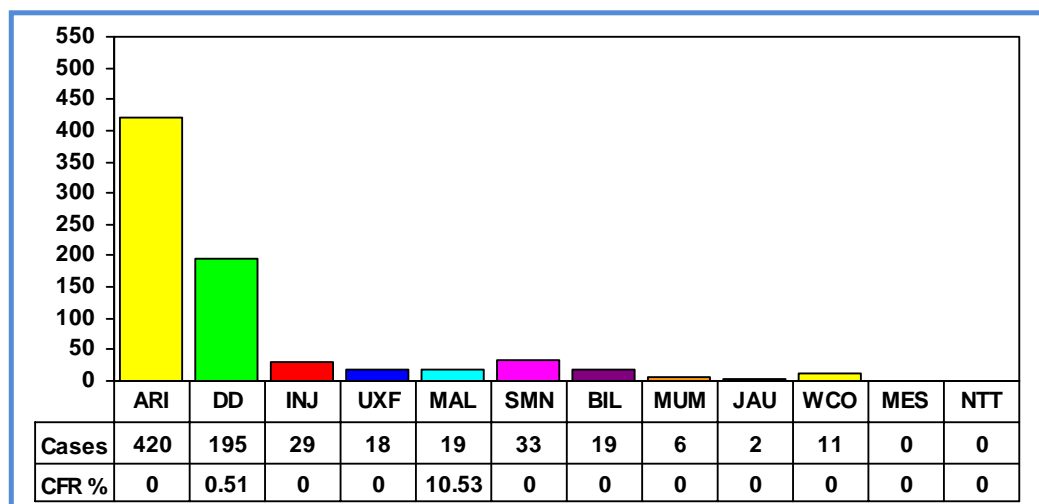


Figure 4: Primary causes for the reported cases and CFRs, in the age group of **LESS than 5 years**, Lower Shabelle region, Somalia, 29 November 2008 - 2 January 2009.

ARI was the most common condition reported in the age group above 5 years of age, with no related death; followed by **DD** with CFR of **0.65%**. The highest CFR (**0.78%**) was found related to injuries of which 128 cases were reported. 24 cases of severe malnutrition (**SMN**) were reported, of them 38% (9/24) from Marka district. 27 Malaria cases (**MAL**) were reported, of them **81%** (22/27) were laboratory confirmed using a rapid diagnostic test. (a breakdown of primary causes of morbidity and mortality in the age group ≥ 5 is given in Figure 5).

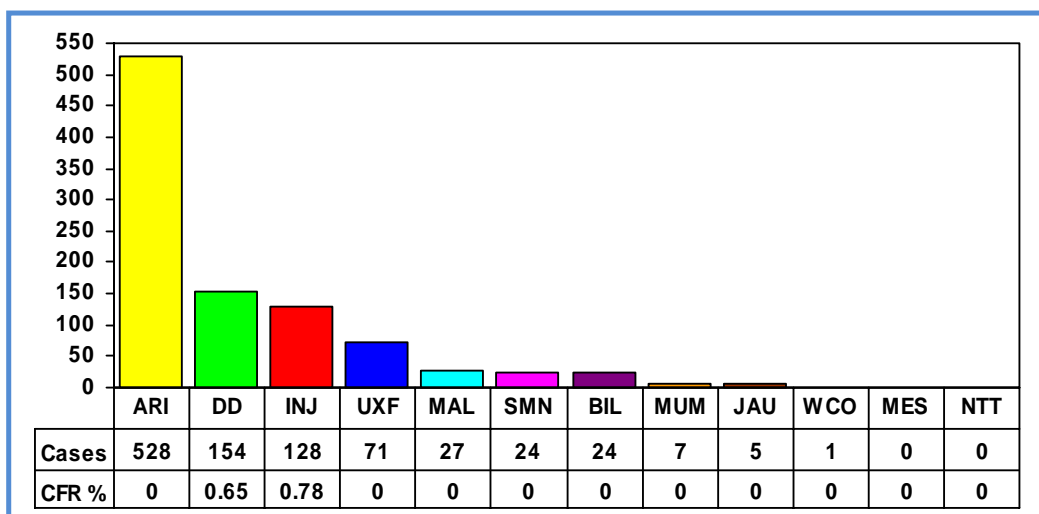


Figure 5: Primary causes for reported cases and CFRs, in the age group of **5 years and above**, Lower Shabelle region, Somalia, 29 November 2008 - 2 January 2009.

⁵ The case fatality rate (CFR) refers to the number of deaths per 100 cases

3 Surveillance Data, Summary of Epidemiological Weeks 48-52

In summary, for the month from 29 November 2008 to 2 January 2009 (epidemiological weeks 48-52 inclusive), a total of **20,396** consultations, including 38 deaths, were reported in all age groups⁶. Of all consultations, **22%** (4,481) stated **acute respiratory infection** (ARI), **8%** (1,658) **diarrhoeal diseases** (DD), **3%** (657) **injuries** (INJ), **2%** (400) **unexplained fever** (UFX), **2%** (334) **severe malnutrition** (SMN), **1%** (293) **Schistosomiasis** (BIL), and **1%** (221) **Malaria** (MAL).

During the same reporting period, of the total 20,396 consultations, **7,775** (38%) were reported in children of less than 5 years⁷, of which **28%** (2,175) were due to **ARI**, **12%** (964) due to **DD**, **2%** (188) due to **SMN**, **2%** (158) due to **INJ**, **2%** (144) due to **BIL**, and **1%** (72) were reported as **MAL**. In this age group, 11 deaths (29% of total number of deaths reported in all age groups) were reported. Of them **3** were **MAL**-related, **2** due to **Neonatal Tetanus** (NNT), **2** were **SMN**-related, 1 was **MAL**-related, 1 **DD**-related, and 2 were due to **other causes** (OTH).

4 Acute Diarrhoeal Diseases

Since the start of the EWARS on 24 May 2008, a total of **11,244** cases of **DD** with **45** related deaths (**CFR 0.40%**) were reported from Lower Shabelle region. In epidemiological week 52, **349** cases with **2** related deaths (CFR 0.57%) were reported, constituting an increase of only 1% compared to the previous epidemiological week. The weekly distribution of diarrhoeal disease cases is shown in Figure 6.

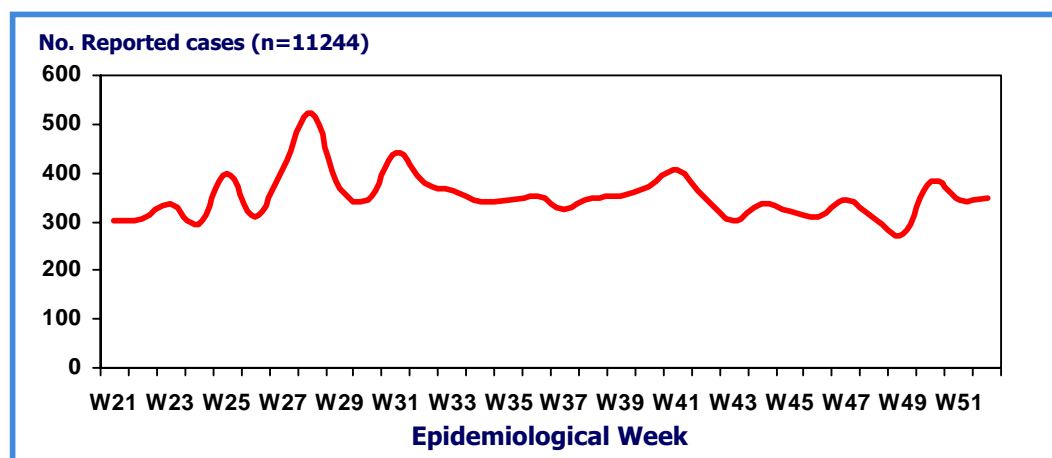


Figure 6: Weekly distribution of reported Diarrhoeal Disease cases, Lower Shabelle region, Somalia, 24 May 2008 - 2 January 2009.

⁶ For detailed breakdown of reported cases, deaths and monthly CFR in all age groups see Annex 1.

⁷ For detailed breakdown of reported cases, deaths and monthly CFR in children under 5 years of age see Annex 2.

Diarrhoeal diseases in children under 5 years represented **62%** (7,024/ 11,244) of all reported cases. Overall, **56%** (25/45) of the total DD-related deaths were reported in this age group. The weekly distribution of reported cases by age group is shown in Figure 7.

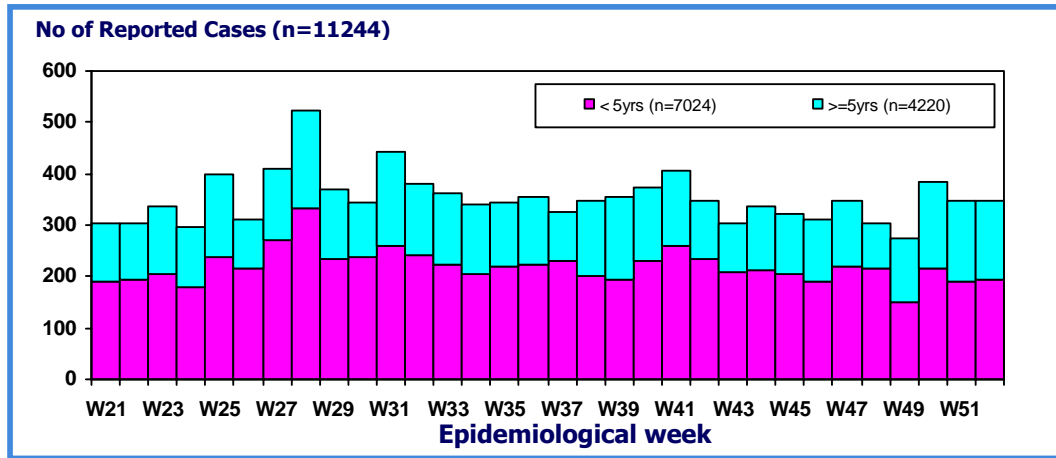
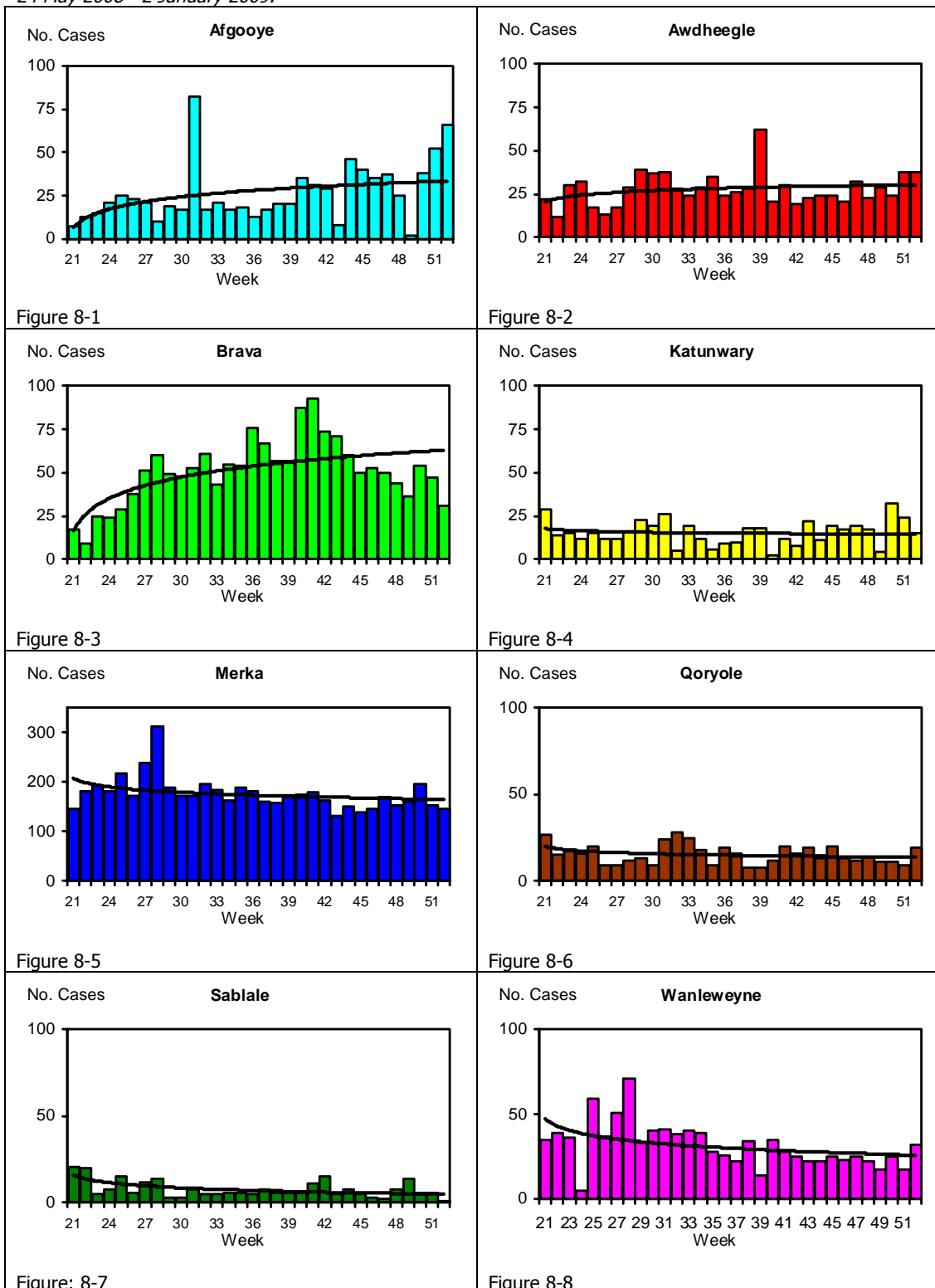


Figure 7. Weekly distribution of reported Diarrhoeal Disease cases by age group, Lower Shabelle region, Somalia, 24 May 2008 - 2 January 2009.

Figure 8: Distribution of reported diarrhoeal disease cases by district, Lower Shabelle region, Somalia, 24 May 2008 - 2 January 2009.



DD continues to contribute significantly to the overall burden of disease in all of the districts in Lower Shabelle region. Overall, Marka district reported 50% (5,638/11,244), followed by 15% (1,655) from Brava district. In epidemiological week 52, Marka district reported **42%** (147/349) of all DD cases, while **19%** (66) were reported from Afgooye, followed by **11%** (37) from Awdheegle, and **10%** (32) from Wanleweyne district. The weekly distribution of reported DD by district is shown in Figure 8.

4.1 Update on laboratory confirmed *Vibrio Cholera* in Marka District

The trend of the laboratory confirmed Cholera outbreak⁸ in Marka district, with onset on 13 August 2008, is showing a significant decrease due to appropriate case management, case referral and supplies. On the 15 December, the case load dropped to an average of 7 cases per week.



Results and Analysis

Between 13 August and 31 December 2008, a total of **688** cases of suspected cholera, including **eight** (8) related deaths (**CFR: 1.16%**) were reported from Marka hospital. Overall, the mean age of the related deaths was 8.28 years, ranging from 0.8 to 32 years. However, no death was reported since 17 October 2008.

The hospital records indicate that **41%** (281/688) were from Holwadaag village, **32%** (217) from Horseed village, and **18%** (125) from Wadajir village. The remaining **9%** (65) of the cases were from other villages around Marka town. The daily distribution of suspected Cholera cases reported from Marka hospital is shown in Figure 9.

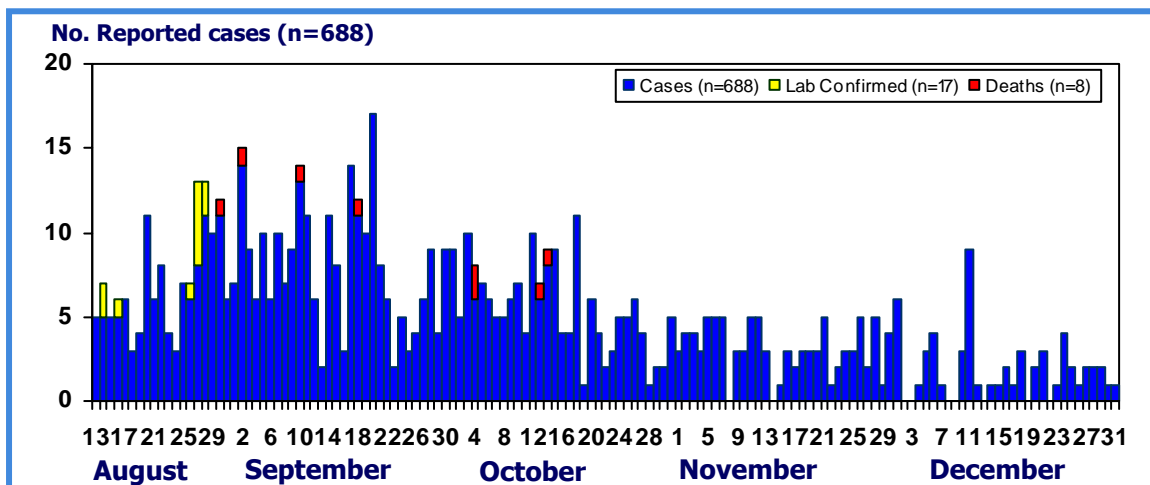


Figure 9: Daily distribution of reported clinically diagnosed and Laboratory confirmed Cholera cases, Marka Hospital, Lower Shabelle region, Somalia, 13 August 2008 - 2 January 2009.

Recommendations

- Enhance the surveillance activities to monitor the AWD in different districts in Lower Shabelle (WHO)
- Continue chlorination of water wells (UNICEF & local NGOs)
- Strengthen monitoring and evaluation activities for water chlorination (WHO)
- Ensure the accessibility of safe drinking water including the chlorination of water transported in donkey carts (UNICEF & local NGOs)
- Strengthening social mobilization and community awareness including sanitation and personal hygiene (local NGOs)

⁸ Further information has already been reported in the *MMMB, September 2008, vol.2*

5 Acute Respiratory Infections (ARI)

Between 24 May 2008 and 2 January 2009, a total of **17,662** cases of **ARI** with **29** related deaths (**CFR 0.16%**) were reported from Lower Shabelle region. The overall trend has been showing an increase since the epidemiological week 40 (27 September – 3 October 2008).

In epidemiological week 52, however, **9%** decrease of the number of reported cases (from 1,046 to 948 cases) with no related death has been observed compared to the previous week.

The weekly distribution of reported ARI cases and deaths is shown in Figure 10.

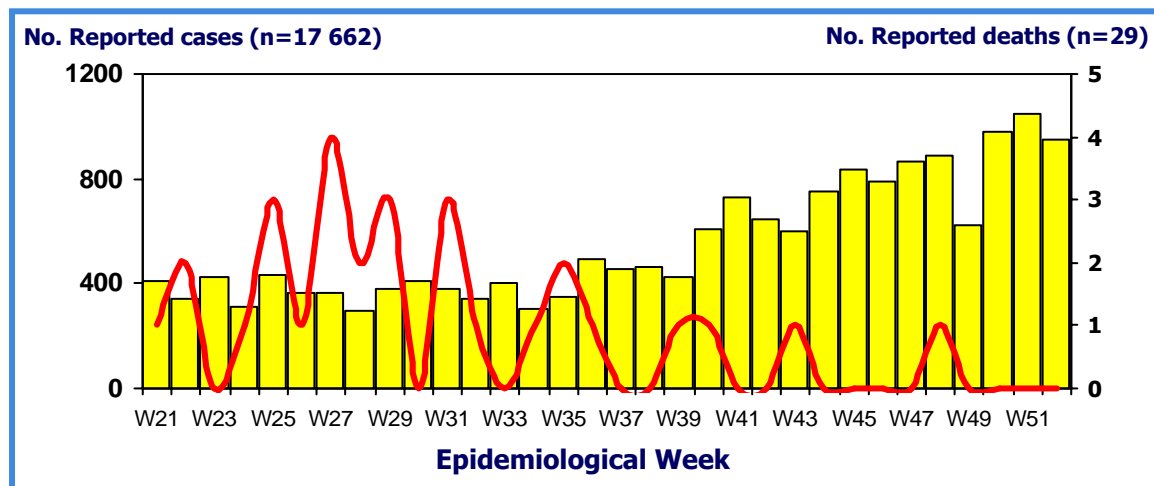


Figure 10: Weekly distribution of reported ARI cases, Lower Shabelle region, Somalia, 24 May 2008 - 2 January 2009.

In epidemiological week 52, the number of **ARI** cases in the age group older than 5 years exceeds the number in the group of less than 5 years of age by **20%** (528 and 420 respectively). **Marka** district reported **60%** (573/948) of all ARI cases, of these **61%** (352/573) were 5 years of age and older. **Afgooye** district reported **17%** (159) followed by **Brava** district with **6%** (60) and Wanleweyne **5%** (46). The distribution of reported ARI cases by age and district is shown in Figure 11.

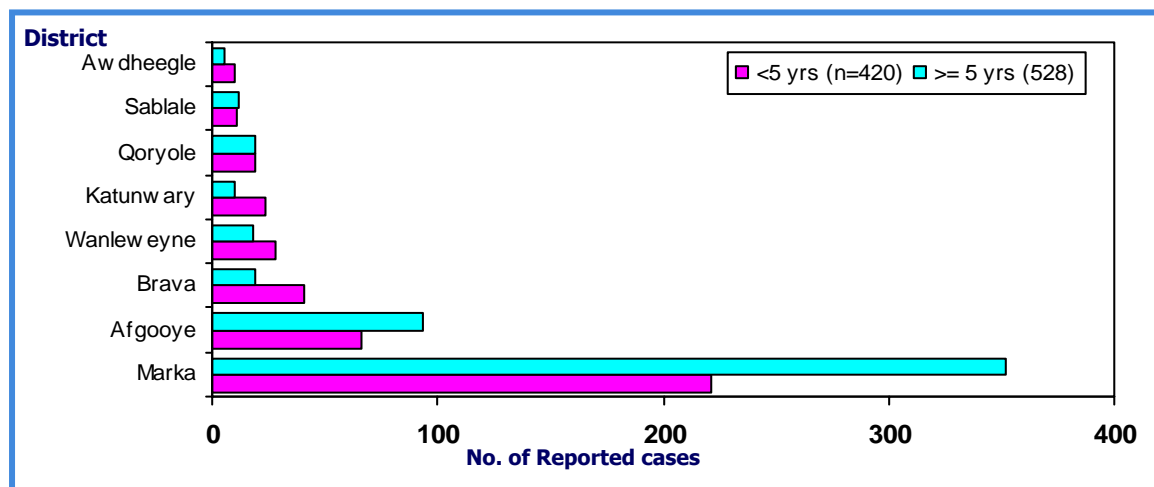


Figure 11: Distribution of ARI by age and district, Lower Shabelle Region, Somalia, 27 December - 2 January November 2009.

Annex 1: Weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR) in all age groups, Lower Shabelle region, Somalia, 29 November 2008 - 2 January 2009.

Week Event	WEEK 48		WEEK 49		WEEK 50		WEEK 51		WEEK 52		TOTAL		CFR
	C	D	C	D	C	D	C	D	C	D	C	D	
AWD	26	0	31	0	33	3	51	0	50	2	191	5	2.62
BD	60	0	54	0	71	0	68	0	81	1	334	1	0.30
OTDR	219	0	188	0	281	0	227	0	218	0	1133	0	0.00
ARI	888	1	620	0	979	0	1046	0	948	0	4481	1	0.02
MES	0	0	0	0	0	0	0	0	2	0	2	0	0.00
MEN	0	0	0	0	0	0	0	0	0	0	0	0	0.00
AFP	0	0	0	0	0	0	0	0	0	0	0	0	0.00
JAU	7	1	2	1	8	0	3	0	7	0	27	2	7.41
AHF	0	0	0	0	0	0	0	0	0	0	0	0	0.00
NNT	1	1	0	0	1	1	0	0	0	0	2	2	100
ATT	0	0	0	0	0	0	0	0	0	0	0	0	0.00
DIPH	0	0	0	0	0	0	0	0	0	0	0	0	0.00
WCO	2	0	0	0	1	0	2	0	12	0	17	0	0.00
MUM	16	0	2	0	14	0	15	0	13	0	60	0	0.00
MAL	46	1	45	0	40	0	44	0	46	2	221	3	1.36
LESH	0	0	0	0	0	0	0	0	0	0	0	0	0.00
BIL	64	0	57	0	68	0	61	0	43	0	293	0	0.00
UXF	51	0	72	1	84	0	104	0	89	0	400	1	0.25
SMN	63	1	64	1	73	0	77	0	57	0	334	2	0.60
INJ	113	0	143	1	137	2	107	0	157	0	657	3	0.46
OTH	2340	2	1562	3	2768	6	2835	2	2739	5	12244	18	0.15
TOTAL	3896	7	2840	7	4558	12	4640	2	4462	10	20396	38	
RU	33		32		34		35		34				

C – Cases, D – Deaths, AWD - Acute Watery Diarrhoea, BD - Bloody Diarrhoea, OTDR - Other Diarrhoea, ARI - Acute Respiratory Infection, MES – Measles, MEN - Meningitis, AFP - Acute Flaccid Paralysis, JAU - Acute Jaundice Syndrome, AHF - Acute Hemorrhagic Fever, NNT - Neonatal Tetanus, ATT - Adult tetanus, DIPH - Diphtheria, WCO - Whooping Cough, MUM - Mumps, MAL – Malaria, LESH - Leishmania, BIL - Bilharzia, SMN – Severe Malnutrition, UXF–Unexplained fever, INJ - Injuries, OTH – Others, RU – Reporting Units. Please note data from late reporting in previous weeks has been updated.

Annex 2: Weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), in less than 5 years old, Lower Shabelle region, Somalia, 29 November 2008 - 2 January 2009.

Week Event	WEEK 48		WEEK 49		WEEK 50		WEEK 51		WEEK 52		TOTAL		CFR
	C	D	C	D	C	D	C	D	C	D	C	D	
AWD	23	0	21	0	17	0	38	0	35	1	134	1	0.75
BD	22	0	22	0	28	0	28	0	28	0	128	0	0.00
OTDR	171	0	106	0	170	0	123	0	132	0	702	0	0.00
ARI	468	1	303	0	464	0	520	0	420	0	2175	1	0.05
MES	0	0	0	0	0	0	0	0	2	0	2	0	0.00
MEN	0	0	0	0	0	0	0	0	0	0	0	0	0.00
AFP	0	0	0	0	0	0	0	0	0	0	0	0	0.00
JAU	1	0	0	0	0	0	0	0	2	0	3	0	0.00
AHF	0	0	0	0	0	0	0	0	0	0	0	0	0.00
NNT	1	1	0	0	1	1	0	0	0	0	2	2	100
ATT	0	0	0	0	0	0	0	0	0	0	0	0	0.00
DIPH	0	0	0	0	0	0	0	0	0	0	0	0	0.00
WCO	2	0	0	0	1	0	2	0	11	0	16	0	0.00
MUM	8	0	1	0	5	0	5	0	6	0	25	0	0.00
MAL	16	1	11	0	12	0	14	0	19	2	72	3	4.17
LESH	0	0	0	0	0	0	0	0	0	0	0	0	0.00
BIL	36	0	32	0	37	0	20	0	19	0	144	0	0.00
UXF	10	0	12	0	13	0	34	0	18	0	87	0	0.00
SMN	36	1	33	1	42	0	44	0	33	0	188	2	1.06
INJ	33	0	36	0	32	0	28	0	29	0	158	0	0.00
OTH	824	0	551	0	824	1	918	0	812	1	3929	2	0.05
TOTAL	1651	4	1128	1	1646	2	1784	0	1566	4	7775	11	
RU	33		32		34		35		34				

C – Cases, D – Deaths, AWD - Acute Watery Diarrhoea, BD - Bloody Diarrhoea, OTDR - Other Diarrhoea, ARI - Acute Respiratory Infection, MES – Measles, MEN - Meningitis, AFP - Acute Flaccid Paralysis, JAU - Acute Jaundice Syndrome, AHF - Acute Hemorrhagic Fever, NNT - Neonatal Tetanus, ATT - Adult tetanus, DIPH - Diphtheria, WCO - Whooping Cough, MUM - Mumps, MAL – Malaria, LESH - Leishmania, BIL - Bilharzia, SMN – Severe Malnutrition, UXF–Unexplained fever, INJ – Injuries, OTH – Others, RU – Reporting Units. Please note data from late reporting in previous weeks has been updated.