



Shabelle River as a source of drinking water in Marka town

Photo: WHO

October 2008 Lower Shabelle Region

This document 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) is a snapshot of the health conditions in those facilities where events are registered and data collected. The MMMB does not reflect the situation from other health facilities.

Highlights

- In the past month (Epidemiological weeks 39-43 inclusive), a total of 16,061 consultations were reported, including 46 deaths.
- In the current week (epidemiological week 43), 3,214 consultations for events under surveillance were reported through EWARS in Lower Shabelle region.
- Overall, **19%** (603) were due to Acute Respiratory Infections (**ARI**) and **9%** (302) due to Diarrhoeal Disease (**DD**).
- Thirty-eight Malaria cases (**MAL**) were reported. Of them, 64% were laboratory confirmed using a rapid diagnostic test.
- Between 24-31 October, 8 deaths were reported; of them **three** were related to severe malnutrition (**SMN**).
- Between 13 August and 31 October 2008, a total of **532** cases of acute watery diarrhoea, including **eight** related-deaths (**CFR: 1.50%**) were reported from Marka hospital. 17 out of 22 stool samples tested positive for *V. cholerae*, serogroup 01, serotype *Inaba*.
- Between 21 September and 3 October 2008, a total of **180** cases of acute watery diarrhea, including 23 related-deaths (**CFR: 12.78%**), were reported from Gololey area and surrounding villages. Six out of 7 stool samples tested positive for *V. cholerae*, serogroup 01, serotype *Inaba*.

In this issue

- ✓ Detailed epidemiological description of the past five epidemiological weeks (39-43 inclusive);
- ✓ EWARS Data, Epidemiological Week N^o 43, 2008;
- ✓ Easy-to-grasp figures showing the trends of Diarrhoeal diseases per district in Lower Shabelle Region;
- ✓ Laboratory confirmed cholera cases in Marka Hospital.

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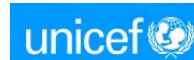
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This update has been made possible with the support of:



1 Reporting Units

The total number of reporting units trained for EWARS in Lower Shabelle is increased to 33 units. The total population under EWARS surveillance in Lower Shabelle region is estimated at **845,651**.

Thirty-three of these sites (**100%**) have sent their surveillance data on time during the epidemiological week 43 (24-31 October 2008).



The reporting timeliness of the EWARS system has increased by **9%** compared with the previous week (Epidemiological week 42). WHO is working towards its goal of covering 100% of Lower Shabelle Region with EWARS. (Table 1)

Table 1. Number of reported units by district, Lower Shabelle Region, Somalia, 27 September-31 October 2008.

| District | Population ¹ | No. Reported Sites/epidemiological Weeks | | | | |
|------------------------|-------------------------|--|-----------------|-----------------|-----------------|------------------|
| | | Week 39 | Week 40 | Week 41 | Week 42 | Week 43 |
| Afgooye | 135 012 | 2 | 2 | 2 | 2 | 2 |
| Awdheegle | 76 700 | 3 | 3 | 3 | 3 | 3 |
| Brava | 57 652 | 3 | 3 | 3 | 3 | 3 |
| Katunwary ² | 50 445 | 5 | 4 | 4 | 4 | 5 |
| Marka ³ | 192 939 | 13 | 13 | 12 | 12 | 14 |
| 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 | 32 (97%) | 31 (94%) | 30 (91%) | 30 (91%) | 33 (100%) |

Since the start of the EWARS in the epidemiological week 21 (24 May 2008), a total of **60,943** consultations were reported through the system from Lower Shabelle Region. The weekly number of reporting units per district is shown in Figure 1.

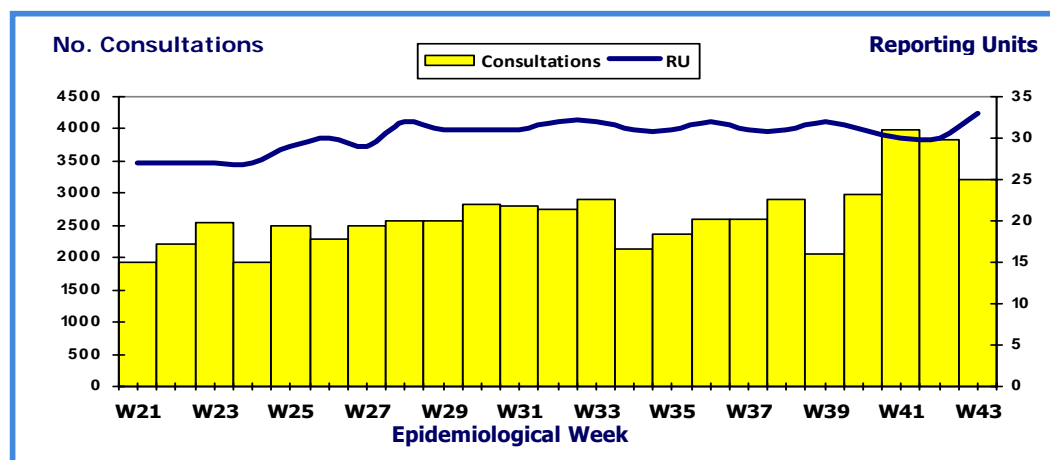


Figure 1: Number of Reported Health facilities by week, Lower Shabelle Region, Somalia, 24 May-31 October 2008.

¹ UNDP Somalia

² One additional health facility was trained and participated in the EWRAS in Katunwary district in the epidemiological week 36.

³ One additional health facility was trained and participated in the EWRAS in Marka district in the epidemiological week 43

2 EWARS Data, Summary (Epidemiological Weeks No 39-43)

In summary, for the month between 27 September and 31 October, 2008 (Epidemiological weeks 39-43 inclusive), a total of **16,061** consultations were reported, of which **19%** (3,010) **acute respiratory infection (ARI)**, **11%** (1,781) stated **diarrhoeal diseases (DD)**, **4%** (589) **injuries (INJ)**, **3%** (446) **unexplained fever (UXF)**, **2%** (358) as **severe malnutrition (SMN)**, **1%** (216) **Schistosomiasis (BIL)** and **1%** (136) **Malaria (MAL)**.

Table 2. Weekly distribution of reported cases, **All age groups**, deaths and monthly Case Fatality Rate (CFR), Lower Shabelle Region, Somalia, 27 September - 31 October, 2008.

| Week Event | WEEK 39 | | WEEK 40 | | WEEK 41 | | WEEK 42 | | WEEK 43 | | TOTAL | | CFR |
|--------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|----------|-------------|----------|--------------|-----------|-------|
| | C | D | C | D | C | D | C | D | C | D | C | D | |
| AWD | 72 | 2 | 64 | 2 | 82 | 3 | 59 | 0 | 42 | 0 | 319 | 7 | 2.19 |
| BD | 80 | 0 | 76 | 0 | 66 | 0 | 74 | 0 | 50 | 0 | 346 | 0 | 0.00 |
| OTDR | 202 | 0 | 232 | 0 | 257 | 0 | 215 | 0 | 210 | 0 | 1116 | 0 | 0.00 |
| ARI | 425 | 1 | 609 | 1 | 731 | 0 | 642 | 0 | 603 | 1 | 3010 | 3 | 0.10 |
| MES | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0.00 |
| MEN | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0.00 |
| AFP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| JAU | 4 | 0 | 3 | 1 | 4 | 0 | 0 | 0 | 7 | 1 | 18 | 2 | 11.11 |
| AHF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| NNT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 4 | 100 |
| ATT | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 50.00 |
| DIPH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| WCO | 2 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 7 | 0 | 0.00 |
| MUM | 13 | 0 | 23 | 0 | 13 | 0 | 13 | 0 | 6 | 0 | 68 | 0 | 0.00 |
| MAL | 43 | 0 | 24 | 0 | 18 | 0 | 23 | 0 | 28 | 0 | 136 | 0 | 0.00 |
| LESH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| BIL | 44 | 0 | 44 | 0 | 36 | 0 | 33 | 0 | 59 | 0 | 216 | 0 | 0.00 |
| UXF | 46 | 0 | 49 | 0 | 124 | 0 | 84 | 0 | 143 | 0 | 446 | 0 | 0.00 |
| SMN | 39 | 1 | 55 | 2 | 90 | 1 | 70 | 1 | 104 | 0 | 358 | 5 | 1.40 |
| INJ | 68 | 0 | 128 | 0 | 133 | 3 | 144 | 1 | 116 | 3 | 589 | 7 | 1.19 |
| OTH | 1026 | 6 | 1665 | 4 | 2419 | 3 | 2469 | 1 | 1844 | 3 | 9423 | 17 | 0.18 |
| TOTAL | 2068 | 12 | 2973 | 11 | 3978 | 11 | 3828 | 4 | 3214 | 8 | 16061 | 46 | |
| RU | 32 | | 31 | | 30 | | 30 | | | | | | |

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, UXF-Unexplained fever, INJ - Injuries, OTH - Others, RU - Reporting Units. Please note data from late reporting in previous weeks has been updated.

During the same reporting period, a total of **6,075** consultations were reported in the less than 5 years old group, (**38%** of the total consultations), of which **25%** (1,523) were due to **ARI**, **22%** (1,129) due to **DD**, **4%** (247) due to **SMN**, **3%** (195) due to **INJ**, **2%** (103) due to **BIL** and **1%** (38) were reported as **MAL**.

Thirty-nine percent (18/46) of the total deaths were reported in this age group. Of them 4 (22%) were **DD**-related, four (22%) **Neonatal Tetanus** (NNT), three (17%) were **SMN**-related, two (11%) **ARI**-related death, two (11%) were due to **other causes** (OTH) and the remaining 17% were jaundice, tetanus and injury-related (one each).

Table 3. Weekly distribution of reported cases, deaths and monthly Case Fatality Rate (CFR), less than 5 years old, Lower Shabelle Region, Somalia, 27 September - 31 October, 2008.

| Week Event | WEEK 39 | | WEEK 40 | | WEEK 41 | | WEEK 42 | | WEEK 43 | | TOTAL | | CFR |
|--------------|------------|----------|-------------|----------|-------------|----------|-------------|----------|-------------|----------|-------------|-----------|-------------|
| | C | D | C | D | C | D | C | D | C | D | C | D | |
| AWD | 34 | 1 | 41 | 1 | 53 | 2 | 38 | 0 | 32 | 0 | 198 | 4 | 2.02 |
| BD | 32 | 0 | 31 | 0 | 23 | 0 | 37 | 0 | 22 | 0 | 145 | 0 | 0.00 |
| OTDR | 129 | 0 | 158 | 0 | 185 | 0 | 159 | 0 | 155 | 0 | 786 | 0 | 0.00 |
| ARI | 221 | 1 | 257 | 1 | 397 | 0 | 336 | 0 | 312 | 0 | 1523 | 2 | 0.13 |
| MES | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 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 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 7.69 |
| AHF | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| NNT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 4 | 100 |
| ATT | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 100 |
| DIPH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| WCO | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 0.00 |
| MUM | 4 | 0 | 10 | 0 | 6 | 0 | 5 | 0 | 3 | 0 | 28 | 0 | 0.00 |
| MAL | 12 | 0 | 5 | 0 | 3 | 0 | 8 | 0 | 10 | 0 | 38 | 0 | 0.00 |
| LESH | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.00 |
| BIL | 15 | 0 | 10 | 0 | 24 | 0 | 16 | 0 | 38 | 0 | 103 | 0 | 0.00 |
| UXF | 6 | 0 | 4 | 0 | 6 | 0 | 6 | 0 | 10 | 0 | 32 | 0 | 0.00 |
| SMN | 18 | 0 | 38 | 2 | 75 | 1 | 46 | 0 | 70 | 0 | 247 | 3 | 1.21 |
| INJ | 32 | 0 | 44 | 0 | 35 | 1 | 47 | 0 | 37 | 0 | 195 | 1 | 0.51 |
| OTH | 361 | 2 | 521 | 0 | 624 | 0 | 699 | 0 | 561 | 0 | 2766 | 2 | 0.07 |
| TOTAL | 867 | 6 | 1120 | 5 | 1437 | 5 | 1399 | 1 | 1252 | 1 | 6075 | 18 | |
| RU | 32 | | 31 | | 30 | | 30 | | | | | | |

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, UXF–Unexplained fever, INJ – Injuries, OTH – Others, RU – Reporting Units. Please note data from late reporting in previous weeks has been updated.

3 EWARS Data, Epidemiological Week N^o 43, 2008

Between 24-31 October 2008 (epidemiological week 43), a total of **3,214** consultations were reported through EWARS in Lower Shabelle region. Overall, **19%** (603) due to **ARI**, **9%** (302) were due to **DD**, **4%** (143) due to **Fever of Unknown Origin (UXF)**, **4%** (116) due to **INJ**, **3%** (104) due to **SMN**, **1%** (28) due to **MAL**.

ARI represented **25%** and **14%** in the less than 5 years old and 5 or more years old respectively. **DD** was found to be higher in those less than 5 years and represented **17%** of the total consultations. In the same period, **8** deaths were reported; of them **3** were **SMN**-related, **1** was **ARI**-related, **1** was acute Jaundice Syndrome (**JAU**)-related, and the remaining **3** were due to **OTH**.

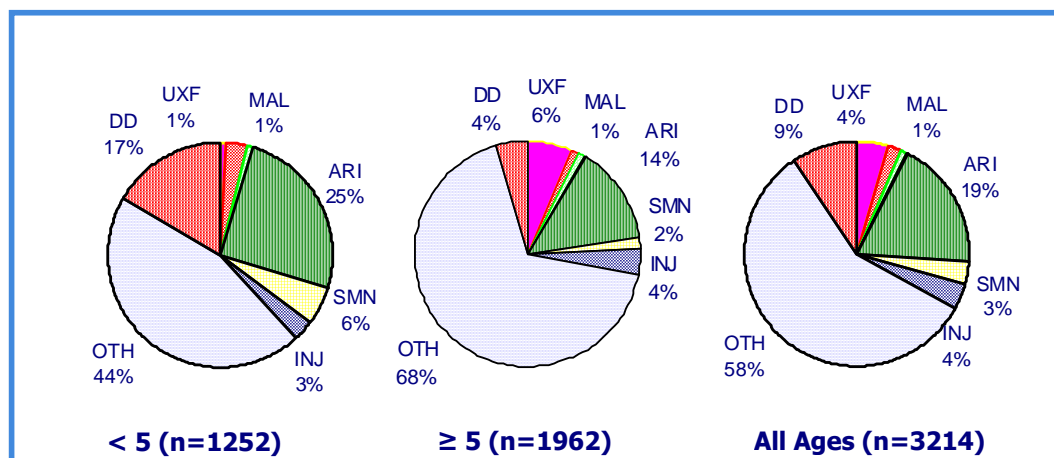


Figure 2. Proportion of primary causes for all reported cases, Lower Shabelle Region, Somalia, 24-31 October 2008.

The below graph (Figure 3) shows that Acute Respiratory Infections and Diarrheal diseases are the most common of communicable diseases throughout the region; vector borne diseases (Malaria) are present predominantly in Katunwary district and Bilharzia is present in Qoryole, Marka, Katunwary and Brava Districts. Vaccine preventable diseases mainly occur in Qoryole, Marka, Katunwary, Brava, Awdheegle and Afgooye district. The later also presents the highest rate of injuries and severe malnutrition in the region, followed by Marka and Katunwary district. Unexplained fever is most common in Marka, Sablale and Awdheegle districts.

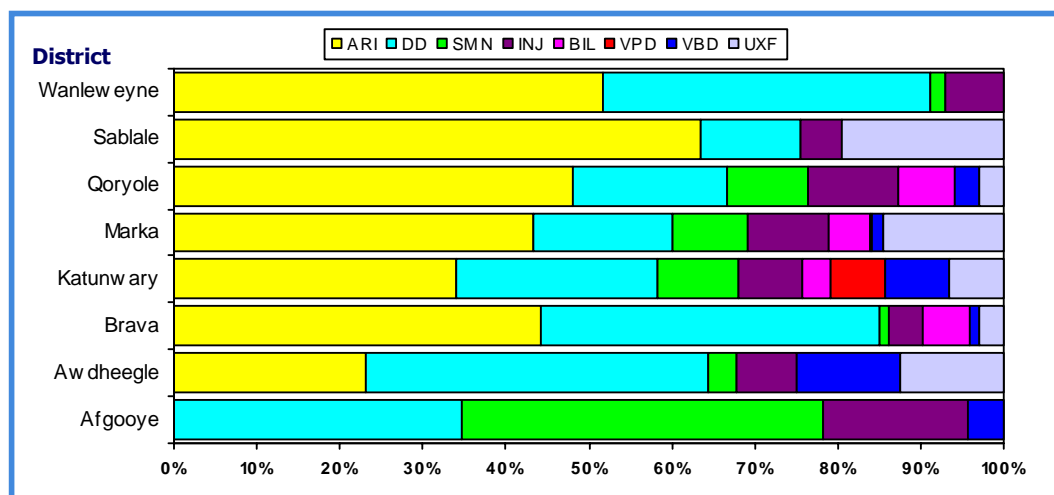


Figure 3. The distribution of reported health events by district, Lower Shabelle Region, Somalia, 24-31 October 2008.

4 Distribution of reported cases and CFR⁴ by Age Group

ARI was the most common health event reported among persons older than 5 years of age, with one related death (**CFR 0.34%**), followed by **DD**. Seventy-nine (79) cases of injuries (**INJ**) were reported with highest CFR of 3.80%. Thirty-four (34) cases of severe Malnutrition (**SMN**) were reported, of them 56% (19/34) from Marka district. Eighteen (18) Malaria cases (**MAL**) were reported of them 67% (12/18) were laboratory confirmed using a rapid diagnostic test. One case of suspected Meningitis (**MEN**) was reported from Marka district (Figure 4).

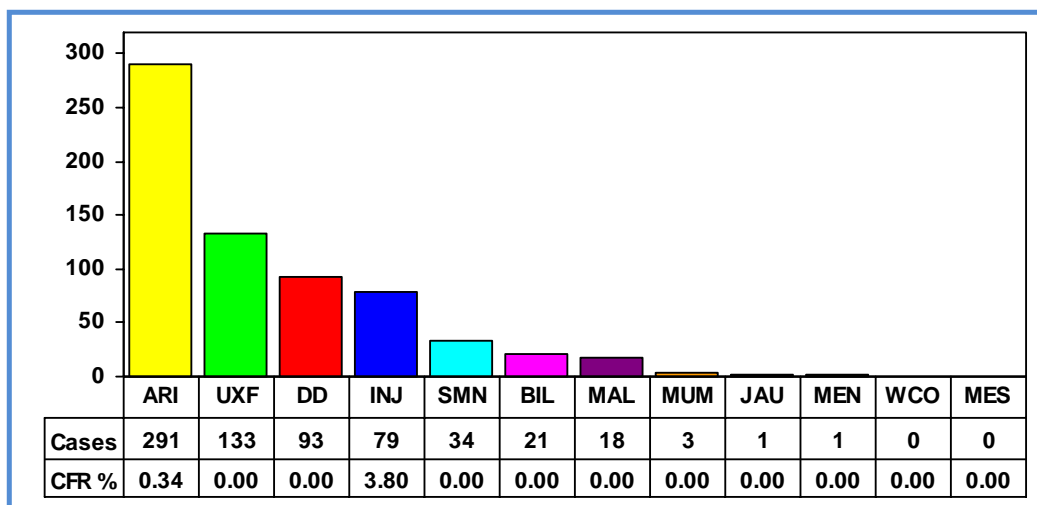


Figure 4. Primary causes for the reported cases and CFRs, **MORE than or equal 5 years of age**, Lower Shabelle Region, Somalia, 24-31 October 2008.

In the under-5 year age group, **1,252** consultations were reported, constituting **39%** of the total number of consultations; **25%** (312) of these reports were attributed to **ARI** while **17%** (209) were due to **DD**. Unlike in the more than 5 years old group, the **INJ** and **UXF** contribute only **3%** and **1%** of the total consultations respectively. One case of **acute jaundice syndrome** was (**JAU**) was reported from Bananey health post, Katunwary district. Of the **8 deaths** reported in the current week (epidemiological week 43), **one** (13%) occurred among children under-5 years as **JAU**-related deaths (Figure 5).

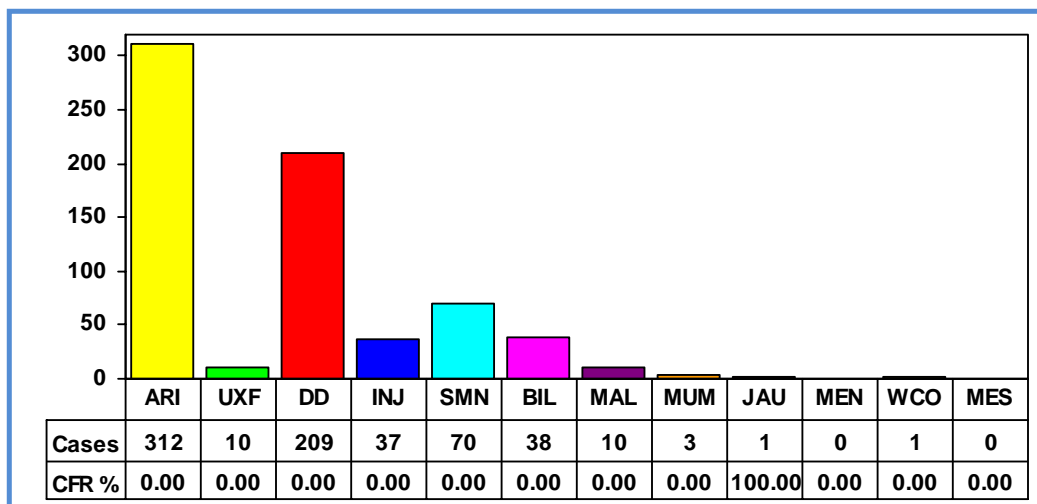


Figure 5. Primary causes for the reported cases and CFRs, **LESS than 5 years of age**, Lower Shabelle Region, Somalia, 24-31 October 2008.

⁴ The case fatality rate (CFR) refers to the number of deaths per 100 cases

4.1 Acute Diarrhoeal Diseases

Since the start of the EWARS on 24 May 2008, a total of **8,271 DD** cases with **37** related deaths (**CFR 0.45%**) were reported from Lower Shabelle region. There was a peak in the epidemiological week 28 due to increased numbers of reported cases from Marka district (n=524, of them 64% were less than 5 years old).

In the current week (epidemiological week 43), **302** cases with **no** related death were reported - **13%** increase in the number of reported cases compared to the epidemiological week 37 (302 and 348 respectively). The weekly distribution of Diarrheal disease cases is shown in figure 6.

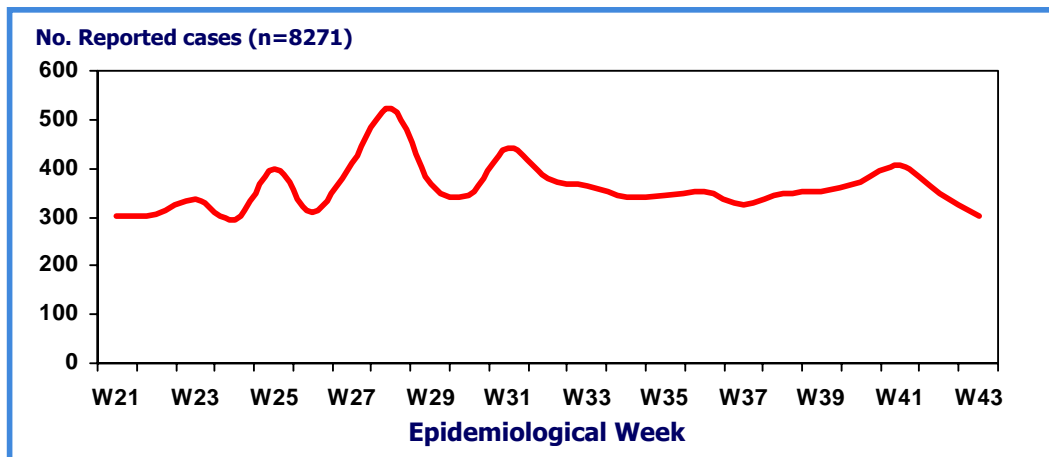


Figure 6. Weekly distribution of reported Diarrhoeal Disease cases, Lower Shabelle Region, Somalia, 24 May-31 October 2008.

Diarrheal diseases in the less than 5 years old represented **63%** (5,233/ 8,271) of all reported cases. Overall, **62%** (23/37) of the total related deaths were reported in less than 5 years old group. The weekly distribution of reported cases by age group is shown in figure 7.

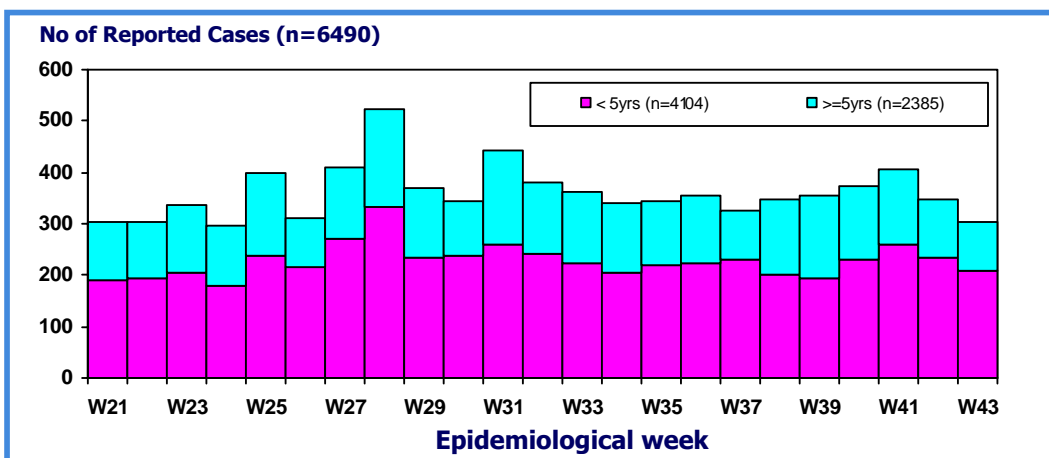


Figure 7. Weekly distribution of reported Diarrhoeal Disease cases by age group, Lower Shabelle Region, Somalia, 24 May-31 October 2008.

DD continues to contribute significantly to the overall burden of disease in all of the districts in Lower Shabelle Region. In the current week, from the 302 DD reported cases, **44%** (132/302) occurred in Marka district, while **24%** (71) were reported from Brava followed by **8%** (23) from Awdheegle and **7%** (22) from Wanleweyne district. The peak observed in Afgooye in the epidemiological week 31 is due to increased numbers of reported diarrheal cases from Figi Hospital (n=82 cases; of them **43%** were less than 5 years old).

4.2 Distribution of Acute Diarrhoeal Diseases by District, Lower Shabelle region, Somalia, 24 May-31 October 2008

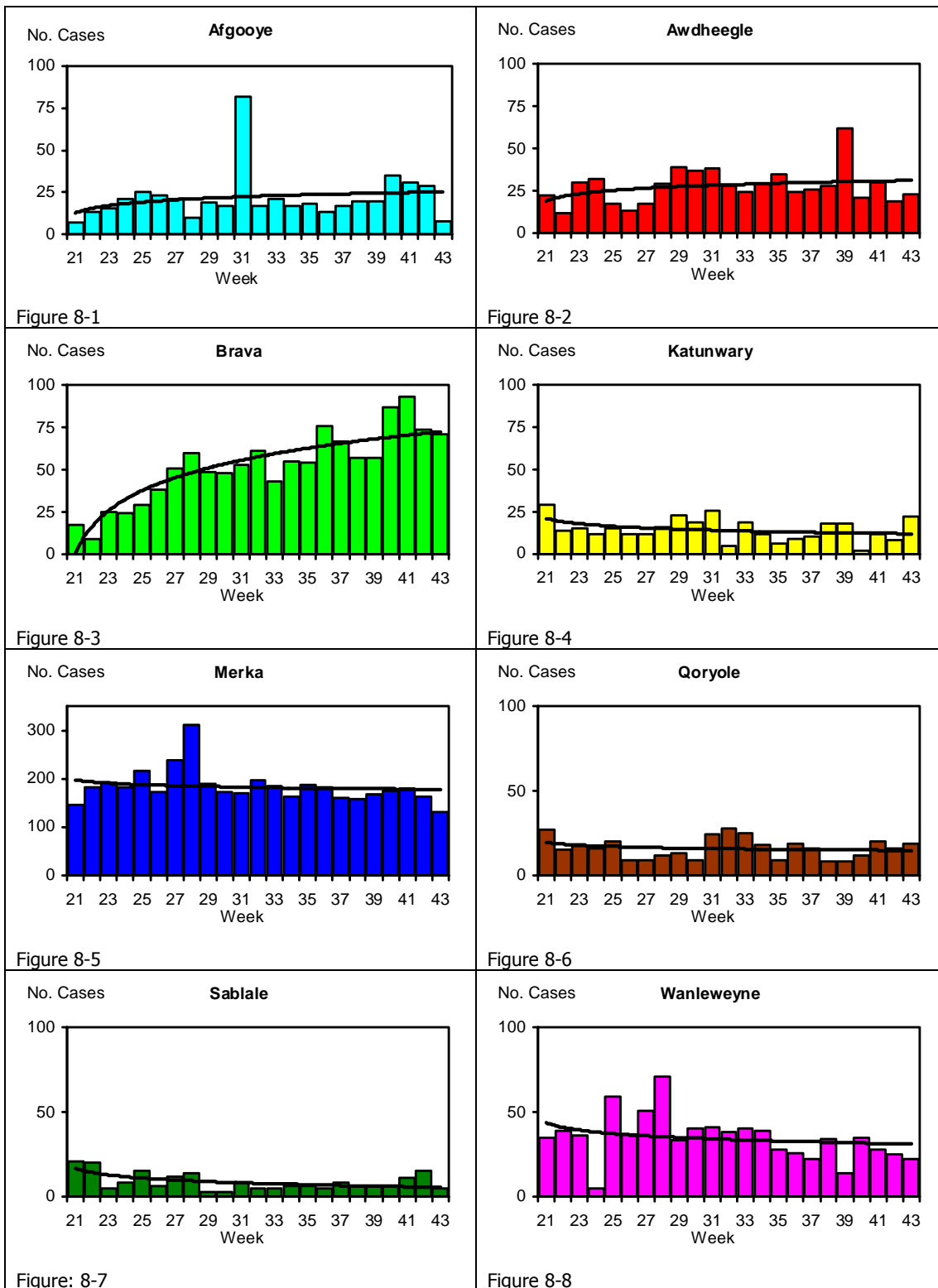


Figure 8. Distribution of reported diarrhoeal disease cases by district, Lower Shabelle Region, Somalia, 24 May-31 October 2008.

4.3 Laboratory confirmed Vibrio Cholera cases in Marka District.

Introduction

The confirmed cholera outbreak in Marka, with onset on 13 August 2008, is still going on.

Results and Analysis

Between 13 August and 31 October 2008, a total of **532** cases of suspected cholera, including **8** related-death (**CFR⁵: 1.50%**) were reported from Marka hospital. **Sixty-four** percent (340/532) was less than 5 years old. **Eighty** percent (424/532) was diagnosed with severe dehydration and required IV treatment. Overall, the mean age of the 8 related deaths was 8.28 years, ranging from 0.8-32 years.



Dehydrated Cholera case in Bulu Xamale Village



The hospital records indicate that **45%** (237/532) were from Holwadaag village, **30%** (160) from Horseed village, and **19%** (100) from Wadajir village. The remaining **6%** (35) of the cases were from other villages around Marka town. All the affected villages are situated less than 5 kilometres from Marka town. The daily distribution of suspected Cholera cases reported from Marka hospital is shown in figure 9.

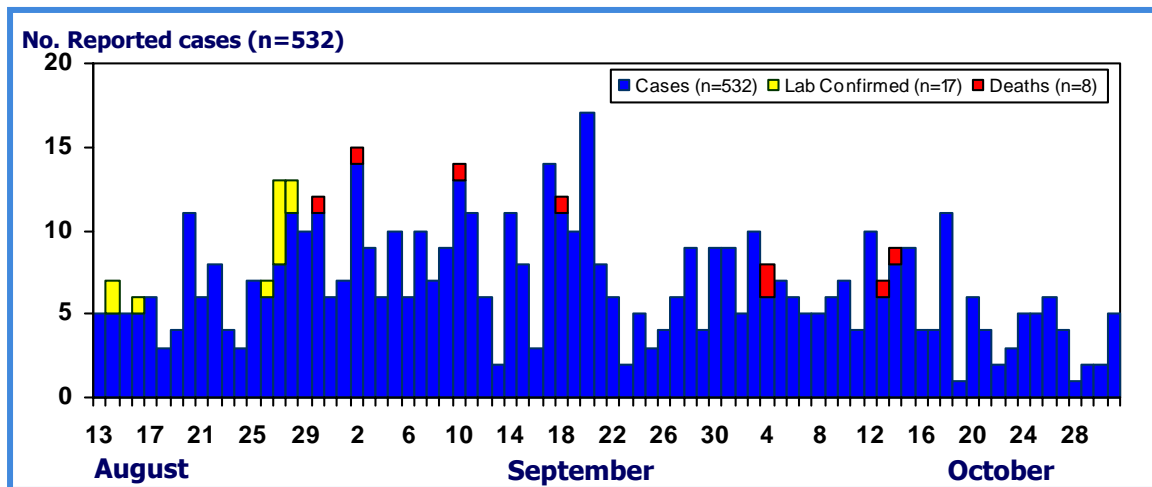


Figure 9. Daily distribution of reported clinically diagnosed and Laboratory confirmed Cholera cases, Marka Hospital, Lower Shabelle Region, Somalia, 13 August-31 October 2008.

⁵ <http://www.who.int/topics/cholera/control/en/index.html> "Prompt and appropriate medical management of cases can significantly decrease mortality (Case Fatality Rate); when applied properly; case-fatality rate should be below 1%. In untreated cases the fatality rate may reach 30-50%. These levels are often observed in crisis situations with overcrowding, limited access to health care and precarious environmental management"

Laboratory Confirmation⁶

Between 18 August and 19 September **2008**, a total of 22 stool samples were tested by AMREF laboratory in Nairobi, Kenya. Of these, 77% (17/22) were positive for *V. cholera*, serogroup O1, serotype *Inaba*. All the samples were collected from the Cholera Treatment Centre in Marka Hospital in Lower Shabelle region. Overall, the mean age of positive samples was 19.5 years, ranging from 1.5-70 years. Fifty-three percent (9/17) were females. The antibiotics sensitivity test showed 100% of the isolated *V. cholera* was resistant to Nalidixic Acid and Cotrimoxazole while sensitive to Tetracycline.

Water sources and Chlorination

UNICEF provided ample HTH chlorine to COSV for chlorinating wells in Marka. However the coverage of water chlorination is not up to the required target though the quality of chlorination has improved over the past few weeks. There are over 100 wells in Marka town and only 10 volunteers with limited logistic support to implement the chlorination. 39 wells were randomly sampled over three separate days. Only 50% had been chlorinated on the day of sampling. Residual chlorine levels ranged from 0.1 to 2.0 grams per liter of water and 12% of those had chlorine levels ≤ 0.2 grams per liter.



Health and hygiene Promotion

Core messages intended for the public covered three large categories for AWD prevention: personal, environmental and food hygiene. The messages are distributed by women trained by COSV, New Way and Ayuub. The local administrative authorities are also supposed to participate.

A joint socio-mobilization day was organized by all partners on 5 October. Vehicles went around town giving the health messages while volunteers went on foot with handheld speakers to areas which were not accessible by car.

COSV is still the lead partner for public health/ hygiene promotion. WHO provided Aquatabs for household water chlorination to be distributed to households during the health promotion/ socio-mobilization campaigns.

Household interviews were conducted to evaluate the coverage of socio-mobilization activities in the three most affected areas: Howlwadag (25); Horseed (25); and Wadajir (25).

In Howlwadag village which accounts for 45% of all cases admitted to Marka Hospital CTC, 100% of the randomly interviewed households had not received any form of socio-mobilization (health messages); 44% (11) had however received the Aquatab distribution. Of the 11 that received Aquatabs only 5 had received the recommended 100 tablets. Another 45% received only 20 tablets per household. All those that received Aquatabs used them correctly.

Horseed accounts for 29% of CTC admissions and 96% of the 25 households interviewed had not received any form of socio-mobilization. The single household that was visited by health promoters received partial health messages. 44% (11) had received Aquatabs but only 2 of them received the recommended quantity, and only 36% used the correct dosage per liter.

⁶ Further information has already been reported in the *MMMB, September 2008, vol.2*

In Wadajir where more than 18% of CTC admissions reside, 52% of households had some socio-mobilization though only 16% of those had all messages delivered. 88% (22) of households received Aquatabs but only 48% of those had the recommended distribution. Two households received particularly high quantities than was recommended (200 & 320 respectively). Of those that received the Aquatabs, 72% used them correctly.

In summary, overall only 14 (19%) of the 75 households interviewed had received some form of socio-mobilization. Of these, only 7 (50%) received all four core messages and 5 (38%) received partial messages. 45 (60%) of all households had received Aquatabs but of those only 16 (35%) received the recommended quantity of tablets and 84% reported correct use. 63% of interviewed households reported drinking chlorinated water.

Urgent Action Recommendations

- To review the main water sources and distribution points in order to reduce the contamination of the water and the current high wastage. If properly managed, this water could reduce the risk of fecal-oral transmitted diseases **(ongoing)**.
- To intensify health/hygiene promotion activities to improve population awareness and practice in relation to AWD e.g. hand washing, proper disposal of human excreta and use of clean and safe drinking water **(ongoing)**.
- To distribute Household (HH) chlorination tablets in the affected villages **(ongoing)**.
- To train staff and community and mobilize them to detect and report/refer cases of AWD fitting the case definition as early as possible **(ongoing)**.

4.4 Laboratory confirmed Vibrio Cholera, Gololey, Middle Shabelle

Introduction

Middle Shabelle is an administrative region in southern Somalia. It is bordered by the Somali regions of Galgaduud, Hiiraan, Lower Shabelle, and Banaadir, as well as the Indian Ocean. The region consists of seven districts: Jowhar, Bal'ad, Adale, A/yabal, War sheikh, Runirgon and Mahaday. Currently there are eight reporting sites in Middle Shabelle participating in the sentinel surveillance system (as EWARS has not yet been established in the region) including Gololey MCH (27 kilometer South West Jowhar town). According to the data



received from Gololey MCH on a weekly basis; between 1 January and 3 October 2008, only 512 Acute Water Diarrhoea cases with no deaths were reported; 91% (466/512) were less than 5 years old. The weekly reported AWD cases from Gololey MCH are shown in Figure 10.

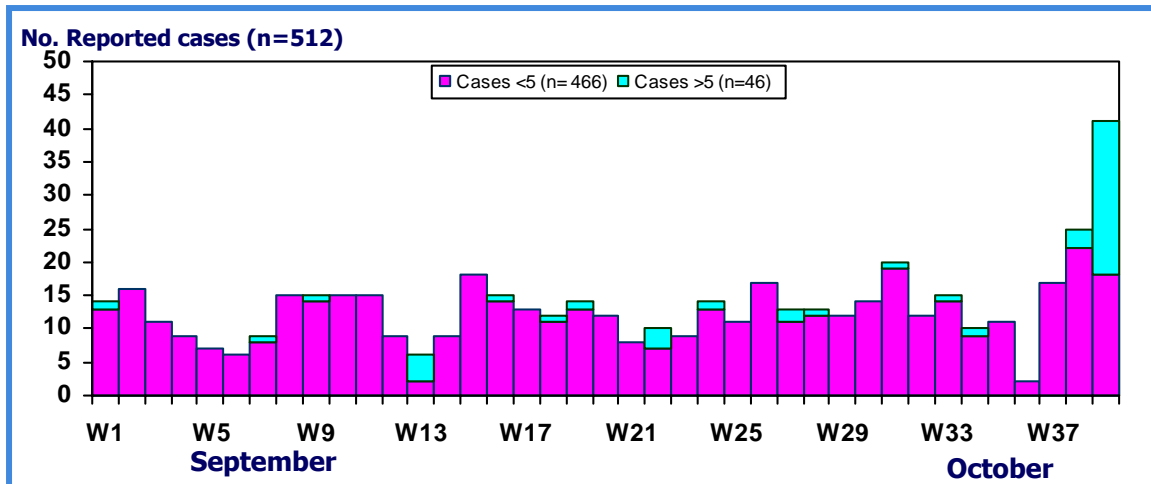


Figure 10. Weekly distribution of reported AWD cases by age group, Gololey MCH, Middle Shabelle Region, Somalia, 1 January - 3 October 2008.

Results and Analysis

On 17 September 2008, an increase of AWD cases was reported from Gololey MCH. The received data shows that between 21 September and 3 October 2008, a total of **180** cases of AWD, including 23 related-deaths (CFR: **12.78%**), were reported. Eighty-two percent (147/180) was equal or more than 5 years old. The AWD cases were reported from 14 villages, namely Bulo Cano, Gololey, Is-Gat, Keysaney, Kaskey, Xero Jeeran, Calasow, Malak Karoor, Garas Maal, Ceejoy, Qori Caadle, Tixsiile, Muryaaley and Moorajiido (Figure 11).

Laboratory Confirmation

On 2 October 2008, a total of 7 stool samples were tested by AMREF laboratory in Nairobi, Kenya. Of these, **86%** (6/7) were positive for *V. cholerae* serogroup O1, serotype *Inaba*. All the samples were collected from the outpatient clinic in Gololey MCH in Middle Shabelle region. Overall, the mean age of positive samples was 22.3 years, ranging from 0.8-58 years. Sixty-Seven percent (4/6) were females. The antibiotics sensitivity test showed 100% of the isolated *V. cholera* was resistant to Nalidixic Acid, Ampicillin and Cotrimoxazole while intermediate sensitive to Norfloxacin Tetracycline.

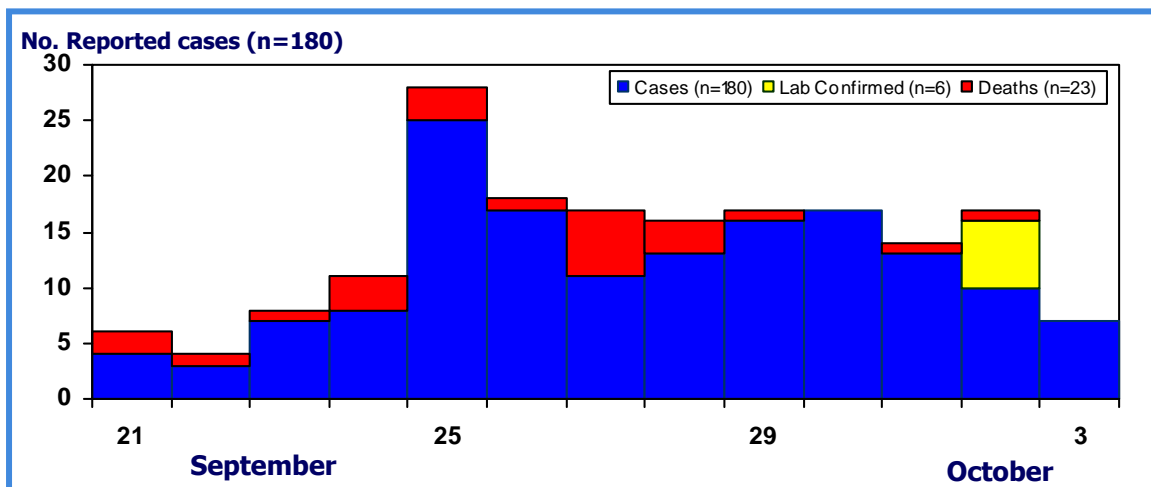


Figure 11. Daily distribution of reported clinically diagnosed, laboratory confirmed Cholera cases and related-deaths, Gololey MCH, Middle Shabelle Region, Somalia, 21 September - 3 October 2008.

Outbreak Response Activities

1. Establishment of Cholera Task Force:

A Cholera task Force was established in Middle Shabelle with the main objectives to coordinate the efforts to reduce the impact of the outbreak; reduce the case fatality rate; and to prevent the outbreak of spreading outside Jowhar town. Task force meetings are held on a weekly basis.

To achieve the above objectives the task force focuses on: (1) case management; (2) chlorination of water sources; and (3) community based social mobilization.

2. Joint field assessment:

From 6 to 7 October, SAACID and Medair conducted a field assessment mission to the villages affected by AWD. Meetings were held with the local authority, represented by the district commissioner of Jowhar town; as well as local traditional leaders who confirmed the occurrence of the outbreak in the affected villages.



3. Case Management:

A tent serving as cholera treatment center has been established in Gololey MCH in addition to an Oral Rehydration Therapy (ORT) corner in the OPD. The current response team on the ground consists of 1 qualified nurse, 2 national EPI officers, and 2 community health workers.

4. Water sources and Chlorination:

No preventive water chlorination activities were done in the area before the outbreak due to a shortage of chlorine supplies. On 19 September, WASH responded by sending 4 drums of chlorine and 10,000 aqua-tabs. 10 days later, additional supplies (4 drums of chlorine, 1 carton of ORS, and 10 cartons of soap) were released by UNICEF to the local partner WOCCA.

Additional WASH AWD/ cholera supplies for Jowhar area covering response needs until April 2009 have been processed. The supplies will be available to all partners involved in the response, and delivery will be coordinated by the regional response coordination task force upon request and certification.

Urgent Action Recommendations

- To provide medical supplies to Gololey MCH (**done**).
- To enhance the active case finding to detect any suspected cases outside Jowhar town (**ongoing**).
- To distribute HH chlorination in the affected villages (**ongoing**).
- To conduct refresher course on AWD case management including WHO recommended case definition, data registration and reporting tools to decrease the case fatality.
- To train staff and community and mobilize them to detect and report/refer cases of AWD fitting the case definition as early as possible (**ongoing**).
- To chlorinate the main water sources in the affected villages and be sure that standardized residual chlorine level.
- To intensify health/hygiene promotion activities to improve population awareness and practice in relation to AWD e.g. hand washing, proper disposal of human excreta and use of clean and safe drinking water.

4.5 Acute Respiratory Infections (ARI)

Between 24 May and 31 October 2008, a total of **9,941** cases of **ARI** with **28** related deaths (**CFR 0.28%**) were reported from Lower Shabelle region. The overall trend showed increase since the epidemiological week 40.

In the current week (epidemiological week 43), **603** cases were reported with **one** related death (**CFR 0.17**). However, **6%** decrease of the number of reported cases (603 and 642 respectively) has been observed compared to the last week (epidemiological week 42).

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

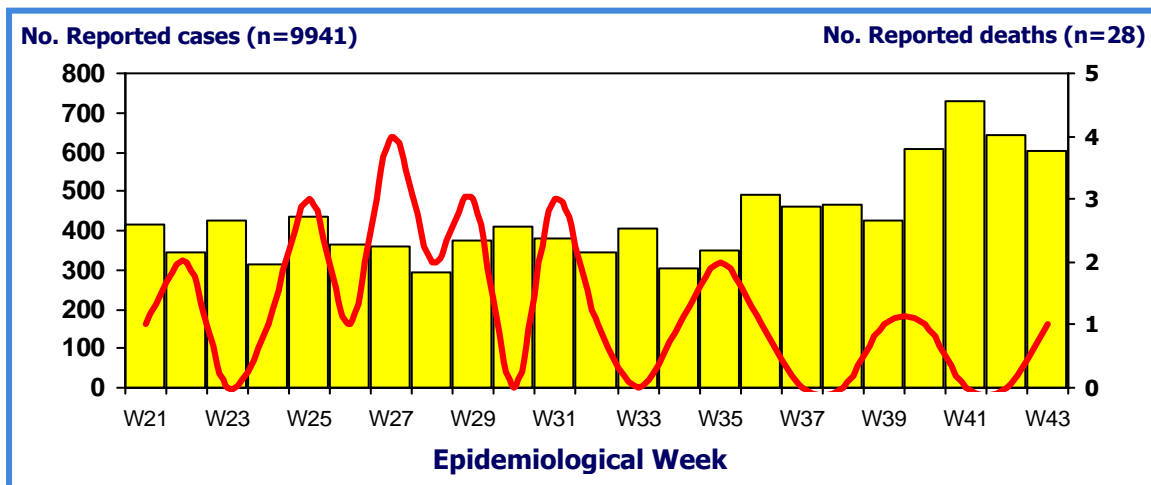


Figure 10. Weekly distribution of reported ARI cases, Lower Shabelle Region, Somalia, 24 May-31 October 2008.

In the current week, the number of **ARI** cases in less than 5 years old group exceeds the number in the group of more than 5 years of age by **2%** (305 and 298 respectively).

Marka district reported **63%** (378/603) of all reported ARI cases, of these **48%** (183/378) were 5 years of age and older. **Brava** reported 13% (77) followed by **Qoryole** 8% and **Katunwary** 5% (49 and 31 respectively). The distribution of reported ARI cases by age and district is shown in figure 11.

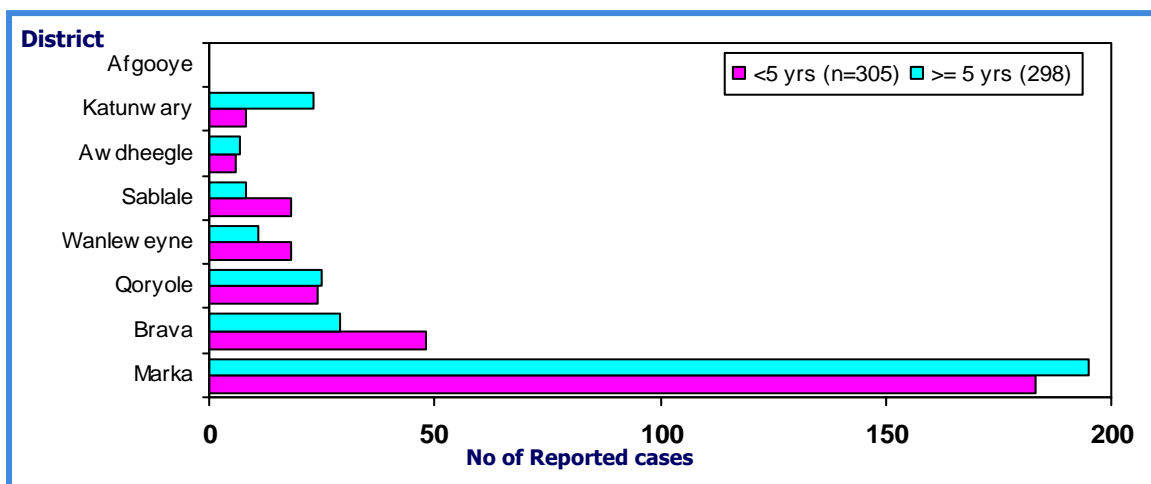


Figure 11: Distribution of ARI by age and district, Lower Shabelle Region, Somalia, 24-31 October 2008.