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Operation Update Report

Kenya: Dengue Fever Outbreak

 International Federation
of Red Cross and Red Crescent Societies

DREF n° MDRKE048	GLIDE n° EP-2021-000047-KEN
Operation update n° 1; 31 August 2021	Timeframe covered by this update: 14 May to 30 August 2021
Operation start date: 14 May 2021	Operation timeframe: 4 months (new end date: 30 September 2021)
Funding requirements (CHF): CHF 370,666	DREF amount initially allocated: CHF 370,666
N° of people being assisted: 250,000 people	
Red Cross Red Crescent Movement partners currently actively involved in the operation: Kenya Red Cross Society (KRCS), International Federation of Red Cross and Red Crescent Societies	
Other partner organizations actively involved in the operation: The Ministry of Health and County Health Departments of Lamu and Mombasa, KEMRI – Wellcome Trust	

Summary of major revisions made to emergency plan of action:

This Operation Update is published to inform stakeholders of the progress achieved so far in implementing this DREF operation, as well as the amendments made on outputs, indicators and indicator targets, to ensure that there is alignment with the results obtained.

In addition, this operation update also informs of a timeframe extension by one month at no cost (new end date: 30 September 2021) for the following reasons:

- IEC materials development and printing** have taken considerably longer time due to delay by MoH to provide the messaging, apparently Kenya Government has not approved Dengue IEC materials specific to Kenya, which required KRCS to utilize WHO IEC materials.
- Procurement of sprayers and larvicidal chemicals** also stalled due to delay by the MoH and Kenya Bureau of Standards (a government agency in charge of standards) in sharing with KRCS the technical specifications of approved sprayers.
- The budget line for volunteer allowances related to fumigation and larvicidal activities** could not be expended due to absence of the chemicals and sprayers to enable this activity.

The timeframe extension will allow for completion of the above activities.

A. SITUATION ANALYSIS

Description of the disaster

Dengue symptoms are also like malaria and Chikungunya and therefore diagnosis in most health facilities is a challenge because of lack of Dengue test kits. This has resulted in clinicians misdiagnosing cases especially in the rural and informal settlements where access to medical proper medical services is a challenge. In Lamu County for example, the County disease surveillance team is yet to update its emergency reporting tool to include Dengue Fever. This means that data can only be captured using the monthly reporting tool. According to the County department of health in Mombasa, the first Dengue cases were reported in early March 2021 with 24 cases testing positive out of 47 (51% positivity rate). In April, another 305 cases tested positive out of 315 (97% positivity rate). Lamu County has also reported a total of 224 positive cases from different health facilities where 59 are children under 5 years old. Shella ward has reported highest number of 159 both under 5 and over 5. The first case was reported in January and peak reported in March with more cases being reported to date. The trend is hardly a reflection of the true situation in the County since people who suffer the milder form of the disease do not seek medical attention.

Cumulatively, 553 cases had been reported in the County within the past 4 months of January, February, March and April, with a peak of cases being reported in April. No deaths have been reported so far within the two counties. As of 20th August, the updated line list in Mombasa County shows cumulative cases of 1,210¹ – Mvita leading with 287 cases, Likoni 221, Jomvu 210, Changanwe 199, Nyali 163, Kisauni 112, and 18 cases from other regional Counties of Kilifi, Lamu, Tana River, and Taita Taveta. The increased efforts are directly attributable to implementation teams' efforts in flushing out community members presenting with dengue fever symptoms akin to malaise and joint pains for further attention in level III and IV facilities.

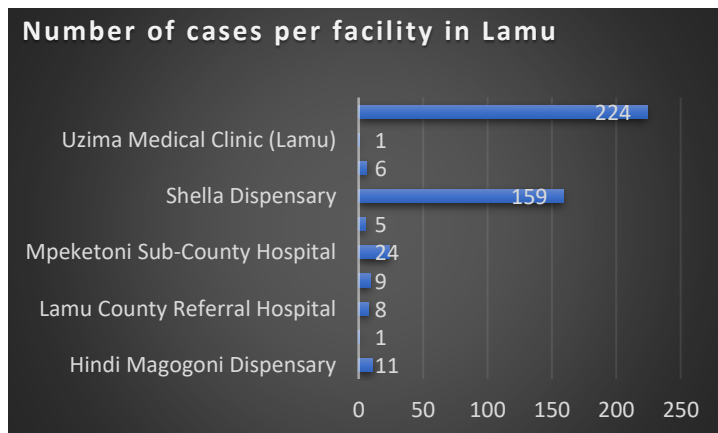


Figure 1: Distribution of dengue cases in Lamu county

The County Director of Public Health - Mombasa made a request for support to Kenya Red Cross on 26 April 2021 and the Chief Officer, Medical Services & Public Health, County Government of Lamu, on the 28 April 2021. In both counties, the cases were still on the rise and urgent action was required to prevent an all-out outbreak which would endanger the lives of the population causing a health disaster. Further requests have been by the County government of Mombasa for further sensitizations in Mvita Sub County which has the biggest share of the cases as per the updated line list.

The two counties have a huge manpower of over 1,000 volunteers distributed across the counties. The volunteers are in different categories including Red Cross action team (RCAT), youth members, Community Disaster Management Committees (CDMC) and Community Health Volunteers (CHVs). Despite having limited access to protection services (psychosocial support) and response equipment's, the volunteers have continuously been able to provide early warning, take part in response and recovery whenever.

Summary of current response

Overview of Operating National Society

Mombasa and Lamu counties have a large manpower of over 1,000 volunteers distributed across the counties. The volunteers are in different categories including Red Cross Action Team (RCAT), youth members, Community Disaster Management Committees (CDMC) and Community Health Volunteers (CHVs). Despite having limited access to psychosocial support and response equipment, the volunteers have continuously been able to provide early warning, take part in response and recovery whenever required to.

In both counties there exists vibrant County Branches with a membership and volunteer data base of over 4,000 community members. The counties have action teams that have been supporting responses involving road traffic accidents, terrorist attacks, floods, drought, disease outbreaks, marine accidents, among others. The teams of members and volunteers have a wealth of capacity and with just disaster specific sensitizations, they are ready for deployment.

The Kenya Red Cross County Branches sit in the county disaster response committee thus playing a pivotal role as auxiliary to both the county and national government during responses. The county teams have taken part in four meetings; three in Mombasa and one in Lamu where discussions revolved around planning for the response including community sensitization and infection prevention measures. The two county health teams have set up a partner coordination framework with once weekly meeting.

The KRCS has been implementing Dengue fever response interventions in close collaboration with the county departments of Health in the 2 counties since May 2021 through this DREF to reduce the risk of spread of the Dengue virus by reaching 60% of the counties' population especially the hard to-reach individuals through communication of risk messaging and other preventive measures.

Start-up activities that included inception meetings with the project teams with support from the KRCS regional & HQ teams, Health Management Teams at both county and sub county level and Stakeholders in both Counties were done to introduce the project and jointly plan for smooth implementation and ownership of the process by all parties. Mapping of the most affected areas for targeting and identification of capacities to be built through sensitization was also done. Implementation was then rolled out with constant monitoring and support supervision jointly by the KRCS and MoH teams.

¹ County Disease Surveillance data

Overview of Red Cross Red Crescent Movement in country

There is close coordination both at the national and the field levels, where partner National Societies support Kenya Red Cross Society in the Disaster related projects in the two counties. IFRC and ICRC continue to support KRCS in different platforms from a long-term relationship that goes beyond the current outbreak and especially that several partner NS, ICRC and IFRC have their regional offices in Nairobi (Kenya). There are currently no Movement partners supporting Kenya Red Cross in this Dengue outbreak response.

Kenya Red Cross with support from various donors (RCRC Movement partners and EU) is currently implementing the following projects in both counties.

Lamu County

- Livelihood's recovery and resilience program for communities in conflict zones.
- Water hygiene and sanitation program.
- Innovation lab project.
- Drug and substance abuse rehabilitation center.

Mombasa County

- COVID-19 response and resilience.
- HIV prevention and management program.
- Cholera prevention and maternal and child health in informal settlement.

The National Society has staff and volunteers implementing these projects and has offices in the two counties in addition to a regional office in Malindi (Kilifi). The National Society also has three land cruisers hard top vehicles in the two counties as well as four land cruiser hard tops at the regional office. The region also has a warehouse at its regional offices at Malindi town.

Overview of other actors' actions in country

At the County, the Departments of Health are coordinating the emergency response; a task force has been set up to spearhead actions aimed at controlling and containing this outbreak. The department of Health is in both counties conducting epidemiological surveillance, case detection and treatment through its network of hospitals and health centers and has kicked off mosquito net distribution to prevent Dengue, malaria, another vector-borne disease of concern particularly in Mombasa. Additionally, the national Ministry of Health is supporting the two counties with technical staff (Disease Surveillance and Case management) from Nairobi. KEMRI-Well Trust is currently running the tests at its Kilifi laboratory.

Needs analysis and scenario planning

Needs analysis

The first suspected cases of the current outbreak were reported in January and February in Lamu and Mombasa counties respectively. Cumulatively, 1,210 cases have been reported as of 20 August 2021.

In Mombasa County, suspected cases were reported in four sub counties and out of the first 47 samples collected, 24 (51%) were confirmed positive by blood PCR test. Retrospective review of weekly data trends from 2016-2021 indicates that Mombasa sub counties of Mvita and Jomvu report the highest burden of the disease with a monthly mean of 147 and 74 respectively. However, the recent samples collected indicated wider distribution of the disease in all sub counties. This is in concurrence with previous outbreak data and monthly trends, which shows that annual upsurges are experienced during the short and long rainfall period with dual peaks in February and June.

We are already in the same period and with heavy rains expected; preventive measures need to be accelerated to reduce the impact of the disease. From the onset of the outbreak, a total number of 315 tests have been done with 305 turning positive hence, a sample positivity rate of 97%. It has been reported that female individuals are more affected than males from the cases identified, and the 21-40 age group were more affected in Mombasa. Changamwe Sub County reported highest number of cases in the County.

Operation Risk Assessment

All risks were detailed in the [EPOA](#). However, an unexpected element was the delays noted by the Ministry of health in sharing the specifications of the sprayer tanks and IEC materials, which has led to this timeframe extension.

B. OPERATIONAL STRATEGY

Overall objective

To reduce the risk of spread of the Dengue virus by reaching 30% of the two counties' population especially the hard-to-reach individuals through communication of risk messaging and other preventive measures. Overall, the operation will target 250,000 people directly with any of the interventions of this project (health educations, trainings, IEC, etc) and 405,676 indirect beneficiaries in Mombasa and Lamu Counties.

Proposed strategy


KRCS teams continue to ensure that inclusion of all genders during targeting, mobilisation and implementation of all activities is considered. Guided by the minimum standards for PGI in the humanitarian context, the field teams have ensured that community members targeted by the response interventions are able to access the services offered by the field teams, their dignity is upheld while rendering services and a safe environment is guaranteed.

During implementation of the response interventions for dengue fever, integration of Covid-19 messaging and sensitization of the IPC guidelines has been done. This has majorly been done through the radio talk shows, communication of early warning messages through the public address system as well as through the door-to-door sensitization sessions.

Kenya Red Cross Society, being auxiliary to the county and national government has worked through the field teams to ensure that the line departments in the counties push the agenda of all programming, with the field teams providing guidance and technical as well as logistical support. Regular review meetings, developing of joint workplans and having joint monitoring and support supervision activities has ensured that the county governments in the implementation areas are continuously engaged.

The results achieved at this stage of the operation are captured under section C below and include some amendments outputs and indicators and indicator targets, to ensure that there is alignment with the results obtained.

C. DETAILED OPERATIONAL PLAN

	<p>Health People Reached: 516,976 Male: 215,473 Female: 301,503</p>	
Outcome 1: The immediate risks to the health of the affected populations are reduced		
Indicators:	Target	Actual
# of people reached to lessen the immediate risks to health	250,000	516,976
Output 1.1: Reduced risk of dengue infections through information and awareness-raising regarding prevention measures		
Indicators:	Target	Actual
# of CHVs sensitized on Dengue Fever	300	314
# of KRCS volunteers sensitized on Dengue Fever	200	215
# of community members reached in community education and sensitization sessions	300	14,518
# of community members reached in door-to-door sensitization sessions	20,000	404,714
# of community members reached with early warning messages	200,000	321,250
# of radio talk shows conducted	12	11
# of community members reached with radio talk shows	100,000	121,250
Progress towards outcome		
314 CHVs – 201 (87 males and 114 females) in Mombasa and 113 (46 males and 67 females) in Lamu - were identified from the most affected areas and hotspot sub counties. They were complemented by 215 KRCS volunteers - 100 (53 males and 47 females) in Lamu and 115 (60 males and 55 females) in Mombasa - for		

institutional strengthening purposes and together sensitized by facilitators from the county departments of health on etiology of dengue fever, prevention and environmental control. These volunteers were then tasked with conducting door-to-door sensitization supervised by the CHAs/PHOs in the hotspot areas as well as conducting vector control activities.

The combined team of CHVs and KRCS volunteers have so far conducted door to door and community sensitization visits in all the sub counties and affected wards of both Mombasa and Lamu counties. They were able to reach 404,714 persons, i.e., 244,378 females and 160,336 males in 229,581 HHs with preventative messaging for Dengue fever including personal, environmental and domestic control. A total of 562 community dialogue sessions were also conducted reaching 14,518 community members comprising of 5,785 males and 8,733 females and referrals made for 1050 (470 males and 580 females) presenting with dengue fever symptoms akin to malaise and joint pains for further attention in level III and IV facilities.

Two (2) local radio stations in each county, that is, Lamu FM and Tana FM in Lamu and Radio Salaam and Sauti Ya Pwani in Mombasa, all of which provide a variety of listenership to the local populations within the targeted counties were identified and engaged for air preventative messaging on Dengue Fever through radio talk shows. The shows are conducted jointly, by the County health promotion officers together with KRCS personnel have been able to reach 121, 250 persons in a total of 11 talk shows. Additionally, public address systems mounted on KRCS vehicles drove through all the hotspots and affected villages to further reinforce messages shared by the ground-based implementation teams.

Output 1.2: Reduced risk of dengue through implementation of vector control and hygiene practices to prevent mosquito breeding

Indicators:	Target	Actual
# of mosquito nets distributed	20,000	18,550

Progress towards outcome

KRCS provided insecticide treated mosquito nets (ITNs) to the county department of health to minimise and prevent bites from the vector and subsequent transmission especially for the under-fives who sleep during the day when the mosquito bites happen. To prevent double issuance of nets and considering that the mass distribution exercise had been done at the onset of the response, the county department of health teams led distribution of the nets to boarding schools, madrasas, hospitals with inpatient wards, and maternity units for issuance to mothers on ANC visits. The maternity wings in Mombasa were experiencing supply chain shortages following change from governments main supplier of PSI/Kenya earlier this year. 9,700 pcs of nets in 194 bales were distributed to 36 level II and III health facilities in 6 sub counties of Mombasa.

In Lamu County, a total of 8,850 nets have been distributed to mapped out in-patient health facilities, institutions and community members. The remaining nets will also be distributed to identified communities settled in the Boni forest areas who did not benefit from the first distribution exercise done through the 'Mass net distribution' exercise by the county in early May 2021. The team also plans to distribute a total of 350 nets to child minders and caregivers of children under the age of 5 years seeking health services at the Lamu health facility as a reinforcement of the prevention measures for this vulnerable cohort.

Output 1.4: Effective monitoring, evaluation, coordination and supervision

Indicators:	Target	Actual
# of inception meetings held	8	6
# of people attending inception/stakeholder meetings	230	104
# of people attending biweekly coordination meetings	160	261
# of joint monitoring and support supervision sessions held	10	7
# of partners attending the joint monitoring and support supervision missions	140	33
# of post distribution monitoring surveys done	1	0

Progress towards outcome

Six (6) inception meetings (2 at county & 4 at sub county level) were conducted in both counties with CHMTs, Sub County HMTs, and stakeholders including administrative leaders, and officials from the Ministry of Education, and interior and internal security before start of activities for buy in from the targeted beneficiaries. Attended by 104 persons (61 females and 43 females) in Mombasa (52) and Lamu (52) they introduced the project, clarified the roles of KRCS and counties in the project and outlined the reporting structures. From the plenary sessions with the CHMTs, SCHMTs and stakeholders, suggestions were made to have CHAs actively engaged, as they are the direct supervisors for all CHV engagements to ensure close monitoring, technical support and prompt reporting.

Bi-weekly coordination meetings have been convened throughout the implementation of the interventions with the SCPHOs, SCDSC, SCSHC, CHEWs and Vector control persons to discuss on project progress. The main issues that were raised and discussed were provision of PPEs such as masks to CHVs, and immediate larviciding bent on availability of larvicidal and internal residual spraying (IRS) chemicals to leverage on the many water pools created by the ongoing rains. A total of 261 participants (92 males and 169 females) have attended these meetings so far.

Joint support supervision sessions have been conducted with key county focal persons as the County Public Health Officers, County disease surveillance coordinators, County community health strategy focal persons, County Malaria focal persons and Vector Control Coordinators and their sub county counterparts together with CHVs, KRCS staff and county boards.

Amongst issues observed and rectified included delivery of prepositioned larvicidal and fumigation chemicals to the sub counties from the county stores to leverage on existing manpower from the 300 volunteers pending finalization of procurement of chemicals, equipment, and PPEs. The implementing teams were also advised to observe the Infection Prevention and Control guidelines to minimize exposure and risk of contracting COVID-19 while in the line of duty.

Output 1.5: 5 schools per sub county reached with information on Dengue prevention

Indicators:	Target	Actual
# of students attending Dengue sensitization	23,000	28,176
# of student's sensitization sessions on Dengue	175	191
# of teacher ToTs trained on prevention and early detection of the diseases	260	260
# of child minders reached with information on Dengue	90	256

Progress towards outcome

A total of 71 schools (66 in Mombasa and 310 in Lamu) were visited by teams comprising of school health coordinators, PHOs and 160 sensitized ToT teachers (63 males and 97 females) in Mombasa accompanied by the CHVs and KRCSv. Two (2) sessions were conducted per school with a total 20,258 pupils reached in Mombasa (10,211 boys and 10,047 girls) and 7,513 pupils in Lamu (3,728 boys and 3,785 girls) with information on Dengue fever prevention.

A total of 192 persons – 30 males and 162 females in Mombasa identified as care takers from the mother-to-mother support groups in the most affected areas in the 6 sub counties and 64 others (all female) were sensitized by facilitators from the department of health on etiology of dengue fever, prevention and environmental control. This group was sensitized on care for the under-fives in terms of prevention using ITNs especially during the day-time naps for the children as one of the preventive measures against Dengue fever.



Water, sanitation and hygiene

People Reached: 23,660

Male: 11,950

Female: 11,710

Outcome 1: Immediate reduction in risk of waterborne and water related diseases in targeted communities

Indicators:	Target	Actual
# of people reached to lessen impact of waterborne and water related diseases to health	50,000	23,600

Output 1.2: Reduced risk of dengue through implementation of vector control and hygiene practices the prevent mosquito breeding

Indicators:	Target	Actual
# of villages where fumigation of vector breeding sites and at-risk households and public health facilities are identified	100	89
# of community members whose villages, at risk areas and public health facilities are fumigated	50,000	23,660

Progress towards outcome

Through the strong collaboration with the county health teams, the Mombasa project team engaged the field teams to conduct fumigation of identified breeding sites. This was made possible by the fact that there were minimal quantities of the larviciding chemicals available at the county headquarters from a previous exercise. The agreement amongst the teams was to utilize these as procurement of more quantities through this DREF was ongoing. A total of 89 villages in Mvita, Kisauni, and Nyali sub counties of Mombasa with fumigation activities entailing larviciding of stagnant waters, tins/containers, open drains, inspection chambers, dumping sites, tires, toilets and flush toilets. Approximately 23,660 (11,950 males and 11,710 females) community members in the 89 villages had communal at-risk places and public health facilities identified as hot spots fumigated and vector breeding sites destroyed.

In Lamu county, mapping of villages and at-risk households for fumigation was not done since the larviciding chemicals were not available even locally. This will be done once the larviciding chemicals are received through KRCS.

Output 1.3: Provide responsive and evidence-based treatment of reported cases

Indicators:	Target	Actual
# and list of larviciding equipment and chemicals procured	i. Dursban chemical for larviciding – 2,000 ltrs ii. Pantheon 100 mls (Lamda cyhalothrin) for Indoor residual spraying – 4000 sachets iii. Deltamethrin – 2000 ltrs iv. Spray pumps (Stainless) – 300 pcs v. Pressure pumps for fogging – 30 pcs	0
# of personal protective equipment procured	200 sets (overall, gumboots, gloves, goggles, mouthpiece).	0

Progress towards outcome

The procurement process for the larviciding equipment, chemicals and personal protective equipment is currently ongoing, and is being supported by the KRCS national office. The procurement of these items is as per lists submitted by the county departments of health teams with the required specifications per item.

D. Financial Report

The overall amount allocated for implementation of this operation is CHF 370,666 of which CHF 345,791 was transferred to Kenya Red Cross through the funds transfer modality.

Reference documents



Click here for:

- [Emergency Plan of Action \(EPoA\)](#)

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