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Final Report

Pakistan: Dengue Outbreak

 International Federation
of Red Cross and Red Crescent Societies

DREF operation	Operation n° MDRPK017
Date of Issue: 30 June 2020	Glide number: EP-2019-000123-PAK
Operation start date: 11 October 2019	Operation end date: 31 March 2020
Host National Society(ies): Pakistan Red Crescent Society (PRCS)	Operation budget: CHF 124,337
Number of people affected: 19,296	Number of people assisted: 224,333
Red Cross Red Crescent Movement partners currently actively involved in the operation: The International Federation of Red Cross and Red Crescent Societies (IFRC).	
Other partner organizations involved in the operation: Directorate of Malaria Control (DOMC), Ministry of National Health Services, Regulation & Coordination, Islamabad and local administration authorities.	

A. SITUATION ANALYSIS

Description of the disaster

A total of 19,296 dengue positive cases were confirmed and reported to Government Hospitals of Pakistan in October 2019. More than 30 deaths were reported in September 2019 by Federal Disease Surveillance and Response Unit from Field Epidemiology and Disease Surveillance Division – National Institute of Health (NIH), Islamabad. Based on the case trend, daily 365 new cases in Rawalpindi and Islamabad were expected in Government Hospitals until January 2020. Severity of the outbreak was seen by the number of positive cases only in fifteen days i.e. 9,403 cases, with high percentage (51 per cent) of cases reported in Rawalpindi and Islamabad. However, the number of cases significantly dropped post November 2019, due to change in weather. The PRCS and IFRC was warned by the Directorate of Malaria Control (DoMC), Ministry of Health about the dengue outbreak in the twin cities. Community awareness and sensitization about dengue prevalence was a critical need at that point, for which Health Department sought PRCS support, considering their acceptability, presence and effective response capacity across the country. Distribution of free of cost, preventive and protective material were the main hallmark of this support, which included mosquito repellents, Long Lasting Insecticidal Nets (LLINs) and blood screening by skilled health care workers. PRCS immediately responded to the Health Departments request and implemented DREF in the identified risk areas of Rawalpindi and Islamabad, with the aim to sensitize the affected community and timely diagnose them for referral to hospitals. By end of operation, a total 28,823 households (224,333 people) were supported through the Dengue Outbreak DREF interventions.

Summary of response

Overview of Host National Society

In the planning phase, PRCS ensured regular coordination with DoMC and Directorate of Health Services for the approval of Information, Education and Communication (IEC) material by Health Services Academy, specification of mosquito repellents, screening kits and planning of orientation sessions for Community-Based Volunteers (CBVs).

The implementation phase started with a slow pace in early November 2019, due to the anti-government protests in Islamabad by a leading political party. However, the daily household coverage was later enhanced so as to achieve the desired household targets within the operation timeframe as per the plan. A famous religious political party demonstrated against the current Government at the main highways of Islamabad during November 2019. As a security measure, the law enforcement agency blocked the linking roads to Rawalpindi and some main roads to high populated areas in order to mitigate the potential risk for local population. Alternative routes were suggested; however, they were choked due to heavy diversion of traffic from main routes. Therefore, the initial DREF activities remained limited to Islamabad only and project teams couldn't operate in Rawalpindi.

National Society was equipped to achieve the desired results with trained CBVs and existing infrastructure of response and coordination mechanism with DoMC and the Government Health Department.

A total of 92 CBVs were trained for dengue case response, community sensitization, and the use of Open Data Kit (ODK) software for data collection, analysis and validation. Other planned activities of this response have also been completed by virtue of which the DREF reached out and benefitted 14,000 more beneficiaries than estimated initially. PRCS has put together a Dengue Response team within the society volunteer network, comprising of five CBVs and Program Manager PRCS and IFRC. Terms of Reference (ToRs) of this team had been developed in consultation with DoMC, Ministry of Health. In total 27 locations were covered under the DREF response, across Rawalpindi and Islamabad.

City	Location
Islamabad	Sector G/6, G/7, G/8, G/9, F/6, F/7, I/9, I/10 and I/8-1
Rawalpindi	Dhoke Munshi, Rehmat Aabad, Kotha Kalan, Morgah, Dhama Syedan, Gangal, Dhamial, Allama Iqbal Colony, Ahmed Abad, Kamalabad, Tench Bhatta, Westridge, Chammanzar, Rahemabad, Railways scheme 7, Dhoke Farman Ali, Dhoke Chiragh Din, Dhoke Hassu,

Five to six member teams of CBVs were deployed to each location and were switched on weekly basis. In this way they covered 27 locations in two months. The members of each team gathered the local citizens in groups as well as individually and oriented them about ways of preventing dengue while at home, workplace or outside during travel. Most of the beneficiaries had a positive response towards the campaign and expressed the urgent need for this awareness raising regarding dengue and its treatment. Additionally, the provision of mosquito repellents and LLINs was highly appreciated by the community members. Volunteers also received positive comments regarding their hard work and efforts especially for the marginalized segments of the society.

A total of 28,823 households received information about dengue and its prevention in the twin cities. However due to the volatile security situation in the two cities, PRCS was unable to start the field activities as per the agreed workplan and timeline. Nevertheless, training of CBVs, procurement of repellents, diagnostic kits and printing of IEC material was commenced timely. Community members were reached through a five to ten-minute session regarding dengue surveillance.

Mosquito repellents were distributed to 37,672 people in the twin cities and 2,572 people belonging to vulnerable segments received LLINs to protect themselves and their families from dengue and malaria during the summer and monsoon period - when the outbreak of dengue becomes most prevalent.

A total of 16,000 students belonging to 16 primary and secondary schools were sensitized and received information through detailed classroom sessions from PRCS trained volunteers. These students will work as agents of change in their families, with demonstration of change in behavior towards their health and hygiene. This will aid in combating the lethal outbreak of dengue and other vector borne diseases in urban slums of Pakistan.

Additionally, two focus group community consultations were conducted on 13 November 2019 and 3 January 2020 to discuss the feedback and outcomes of PRCS activities.

PRCS procurement department initiated the LLIN procurement process to replenish the existing stock in January 2020. However, the procurement process was an extensive and time-consuming exercise, for which the extension of DREF timeline was requested and approved by IFRC until 31 March 2020 instead of 15 February 2020 to complete the financial requirements of the project. Procurement of LLIN was done in accordance to the usage or stock distributed to the community within the DREF extended timeline.

LLINs were distributed to the target communities in December 2019 from PRCS existing stock, keeping in view the urgency of the response. The total target for LLIN distribution was 3,000 for treated and discharged dengue positive patients from hospitals. However due to the fall in patient/case influx in hospitals, the most vulnerable and high-risk communities were targeted instead. A total of 2,572 LLINs were distributed and the same number of LLINs were provided to PRCS for their stock.

Overview of Red Cross Red Crescent Movement in country

PRCS is the leading humanitarian organization in the country with well-established headquarters, provincial and district branches, transparent procedures and mechanisms, acceptance in the community and a volunteer-base with deep access into the communities, along with the support of Red Cross and Red Crescent (RCRC) Movement partners in the country. PRCS health department with support of staff and volunteers at all levels, works closely with the government authorities to respond to any major health situation in the country. The staff and volunteers are well trained and equipped with all the necessary tools (IEC material, reporting formats, visibility material, etc.). Monitoring mechanisms are well established, enabling PRCS to play its role as an effective and efficient auxiliary body to the government. PRCS was requested by the Government of Pakistan to assist them in responding to the dengue outbreak, and to help fill the gap

in terms of service delivery to the affected and vulnerable populations. Gaps in community-based awareness sessions, mobilizers household visits and support in preventive measures were highlighted during PRCS's meeting with the Government health department.

Besides IFRC, other RCRC Movement partners in the country including International Committee of the Red Cross (ICRC), Danish Red Cross, German Red Cross, Norwegian Red Cross, Turkish Red Crescent and UAE Red Crescent are well connected, and coordination and cooperation is ensured through frequent communication and information sharing.

The IFRC Country Office (CO) receives technical support, when needed, from the Asia Pacific Regional Office (APRO) in Kuala Lumpur, who receive regular information and updates from the CO regarding the disaster or emergency. Continuous guidance has been provided by APRO with regards to the DREF launch and implementation. IFRC has extended extensive support to PRCS in preparing the EPoA, updates and the final operation report for this response operation along with financial reporting.

Overview of non-RCRC actors in country

A team of experts from the World Health Organization (WHO) submitted a report to the Ministry of Health on sustainable solutions for the dengue outbreak¹. According to the WHO strategies, prevention and control relies on reduction in the breeding of mosquitoes through source reduction (removal and modification of breeding sites) and reducing human–vector contact through adult vector control measures. Both control measures need to be implemented simultaneously for effective control. Based on the experts' recommendations, the triage protocol was to assist better management of patients in the health facilities. WHO representatives have visited and conducted dengue outbreak investigations in district Lasbela in order to support the district health teams in controlling the outbreak, while working on the short and long-term measures to control. They also provided IEC material and Combo Rapid Diagnostic Test (RDT) kits for outbreak response activities in district Lasbela.

Corporate sector was also involved in the dengue control activities, with the widespread distribution of key messages on dengue prevention and control via print and social media.

Needs analysis and scenario planning

Need Analysis

Need analysis was conducted to assess the situation of the outbreak and response to address the gaps. As a first step, the foremost challenge for the Government health department was availability of community social mobilizers, who can sensitize the community for prevention. Provision and education of IEC material in easy language to the communities in hotspot areas and urban slums was also a challenge. This is where PRCS was requested to step in and fill in the gaps. PRCS has a huge volunteer base and acceptance in the local people with presence across Pakistan. They started by training their volunteers with the support of expert entomologist from DoMC.

Procurement of mosquito repellents and screening kits was initiated in October 2019, soon after the approval of DREF operation. However, in November 2019, CBV Household (HH) visits were hindered due to the anti-government protests in the twin cities. This caused a delay in the regular plan and timeline. Nonetheless, to mitigate the challenges, focus of activities was shifted to capacity building workshops of CBVs instead. The safest and nearest hotspot areas were covered during this time period i.e. protests.

Since the number of new dengue cases reported significantly dropped from November 2019 onwards, some households were reluctant to spare the time to talk to CBVs for sensitization activities. However, as per the need analysis, CBVs continued to focus on prevention measures, which are important for households to know, when facing the possible peak season in 2020.

Risk Analysis

With Islamabad being the capital, there is always a threat of political unrest causing seizure or delays in project activities. Visit to households, hospitals and universities was hindered in November 2019 because of the anti-government protests in Islamabad which lasted for two weeks. As a result, Islamabad's main highway was blocked, making it difficult for staff and volunteers to travel between Rawalpindi and Islamabad, so the sensitization activities in unsafe hotspot areas were therefore temporarily called off. Field activities resumed after protests ended and security assessment was carried out. To speed up the progress and reach out to the planned target by the end of operation, the number of household visits was enhanced to 1,000 per day after the DREF activities resumed post the protests.

Procurement of LLINs to replenish the existing stock at PRCS was initiated in December 2019. The procurement process was initially planned through PRCS's pre identified vendors for LLIN purchase, however, due to non-availability of

¹ <https://www.nih.org.pk/wp-content/uploads/2019/12/47-FELTP-Pakistan-Weekly-Epidemiological-Report-Nov-18-24-2019.pdf>

required specification of LLIN as per the WHO standards (HSEMNETRXL, LLIN dimension 190x180x150cm, white denier 150), it took much longer than normal procurement time. Therefore, considering the longer procurement period, extension for the completion of financial activity was approved by the IFRC HQs.

B. OPERATIONAL STRATEGY

Proposed strategy

The National Society regularly conducted assessments for the efficiency of the proposed strategy and to ensure an inclusive approach and gender mainstreaming in all activities. Vulnerable communities were specially taken care of throughout the project cycle and special focus was given to the needs of women, children, elderly population and Persons with Disabilities (PWD). As per the operational strategy regular coordination with all health stakeholders within and outside the organization was ensured. The then ongoing Global Fund 'LLIN Mass Campaign' project was consulted for replenishment of LLIN stock at PRCS warehouse. The ICRC supported 'First Aid Programme' was informed about the ongoing field activities for support, in case of any critical situation at field level. Weekly performance of CBVs households' visits and school sessions were regularly communicated to the Directorate of Malaria Control, to be included in the consolidated monthly reports, which were published online at the end of every month. The report showcased the progress of all partners/stakeholders who were involved in the dengue response including the district health authorities and private hospitals.

PRCS maintained accountability to local health department, the government and people of the affected community throughout the operation, by mainstreaming Community Engagement and Accountability (CEA) with the help of regular data sharing, producing activity updates and compiling community feedback. This information was also shared during the weekly meetings with the DoMC and Directorate of Health Services.

PRCS interventions reached out to 210,270 people within the first three months of the operation – as per the approved DREF operation timeline before the extension. In terms of activity implementation, there was no change in plan and activities per completed in the originally identified hotspot areas of Rawalpindi and Islamabad. However, the number of people reached exceeded the original plan and 224,333 people were reached during the operation timeline. Community feedback was sought in identified areas through informal meetings with community elders and stakeholders. The National Society identified volunteers from the same hotspot areas and built their capacity and knowledge for CEA activities which they carried out in their respective areas.

Beneficiary selection criteria for repellent and LLIN distribution was shared with the CBVs by NS. to ensure inclusion and outreach to the affected communities.

PRCS endorses the Sphere Standards with an aim to improve the quality of assistance to the affected communities, following a right-based approach and highlighting the affected people's dignity and right to assistance and protection as set out in the Humanitarian Charter. To elaborate further, affected community participation is ensured by including local and national authorities at all stages of the response operation. For example, consultative meeting with the affected community were ensured before initiating the household visits. Community leaders were engaged in the initial plan and project information was briefly explained to them during the meetings. They were informed about the project team interventions and total households to be covered in their specific areas. Also, to ensure transparency and accountability field monitoring visit, review and audit of data reports was carried out internally and shared with DoMC.

Overall objective and methodology of Community Sensitization:


- to create awareness among general population of target areas, about dengue and its prevention.
- to develop a comprehensive dengue response plan for the ongoing dengue outbreaks. To cover dengue surveillance and community mobilization and coordination.
- to communicate about dengue by elaborating on hygiene and protective measures, which are:
 - Clean the back tray of refrigerators.
 - Cover underground tanks properly.
 - Avoid watering flowers, so that clean water does not stay in the flowerpots, since the dengue mosquito breeds in clean water in shaded areas.
 - Covering, emptying, and cleaning of all water storage containers on a weekly basis. In addition, recommended insecticides at exact dosage can be used in water storage containers.
 - Personal protective measures, such as use of clothing that minimizes skin exposure during daylight hours is recommended.
 - Applying repellents to exposed skin or to clothing. Insecticide-treated mosquito nets provide good protection from mosquito bites for those who sleep during the day (e.g. infants, people confined to beds due to illness or age, dengue patients, and night-shift workers) as well as during the night.

- For indoors, household aerosol products, mosquito coils, or other insecticide vaporizers may reduce biting, if used according to the instructions on the label.
- Household fixtures such as windows, door screens, and air conditioning units can also reduce biting.
- to donate mosquito repellents and LLINs along with dengue awareness flyers/brochures, in schools, railway stations and other public places to spread awareness about the dengue virus.
- to deploy rapid response teams to conduct active response at household level and in infected areas.

Open Data Kit software system was used for valid and reliable data entry of IEC material and repellents distribution. Volunteers were trained on the use of the software application on their smart phones for daily data entry and reporting. The software link was shared with the Government focal person and IFRC for monitoring, data analysis and performance validation purpose

There was no change in the overall support services, case management and screening through Medical Technicians in the hotspot areas. However, the number of positive cases reported in Government hospitals declined from November onwards. Therefore, PRCS cancelled the initial plan of ambulance deployment in these areas since it wasn't needed anymore and the screening kits that were procured will be used next year (if need be) to support the Government in identification and timely management of positive cases.

C. DETAILED OPERATIONAL PLAN

 <p>Health People reached: 224,333 Male: 109,923 Female: 114,410</p>		
Outcome 1: The risk of Dengue transmission is reduced by raising awareness through health risk communication campaign		
Indicators:	Target	Actual
<i># of households with reduced chances of transmission of Dengue</i>	28,800	28,823
Output 1.1: Targeted population is provided with information on Dengue transmission and prevention		
Indicators:	Target	Actual
<i># of vulnerable people that are sensitized on Dengue transmission and prevention</i>	210,270	224,333
Output 1.2: NS develop the capacity to assess and provide relevant long-term health care support to vulnerable households		
Indicators:	Target	Actual
<i># of patients that have received LLIN and information on its proper use</i>	3,000	2,572
<i># of people that have received repellents and its use</i>	46,200	37,672
Output 1.3: Community based surveillance implemented		
Indicators:	Target	Actual
<i># of weekly surveillance reports submission from both districts</i>	8	8
<i># of coordination meetings with the CBVs team and MoH staff</i>	3	3
Output 1.4: Dengue case management strengthened		
Indicators:	Target	Actual
<i># of schools strengthened for Dengue case management</i>	16	16
Output 1.5: Hospitals supported through volunteers		
Indicators:	Target	Actual
<i># of cases managed through volunteers at hospital</i>	3,000	0
Narrative description of achievements		



CBVs conducting door-to-door visit to households to deliver key messages with IEC materials of prevention against Dengue virus and introduction to good practice. (Photos: PRCS)



School awareness sessions with students, and IEC materials distributed to reinforce the awareness campaign. (Photos: PRCS)

Heavy monsoon rains, public failure to clear rain-soaked garbage, standing water pools and other potential breeding grounds for mosquito larvae attribute to the higher number of cases reported in identified hotspot areas of Rawalpindi and Islamabad including both urban and suburban areas. In view of the information gap among local communities, awareness raising campaigns were designed for households, schools and hospitals as part of the dengue operation.

On 29 and 30 October 2019, a total of 92 CBVs were trained for awareness raising and prevention against dengue virus to prevent further spread of the disease in addition to supporting timely diagnosis, treatment, safe waste disposal practices and effective use of disposal system provided by the district authorities.

In November 2019, the CBVs were deployed to the identified hot spot areas in Islamabad and Rawalpindi by PRCS as per the request of Ministry of National Health Services Regulation and Coordination (MNHSRC) to support in the dengue outbreak operation. The CBVs, which were split in eight teams, delivered key messages to targeted community via door-to-door visits, using IEC material regarding prevention against dengue virus and good practices. Initially, it was planned to distribute the repellents to targeted households during the door-to-door visits, however, because it took longer than planned time for the procurement of repellents, therefore it was decided to carry on the sensitization activities and leave the distribution for later. The awareness raising activities in Islamabad and Rawalpindi were completed by November 2019 through CBVs who talked about key messages on dengue prevention measures. An estimated 224,333 people were sensitized on dengue transmission and prevention. Procurement of mosquito repellents was completed by end of November 2019 and 37,672 repellents were distributed during the entire month of December 2019. In total 28,823 households were reached to help reduce the chances of dengue transmission.

In addition, CBVs completed the dengue Larval Source Management (LSM) campaign for 16,000 students in 16 schools, giving information about mosquito breeding sites, preventive and control measures, role of Department of

Malaria Control for Vector Control and breeding sites and how community can support the supplemental vector control interventions.

In terms of distribution of LLINs, initially the plan was to distribute them in hospitals that are catering to high number of dengue patients in Rawalpindi and Islamabad. However, November 2019 onwards, the number of daily new cases had dropped significantly in the twin cities². Keeping in view this situation, PRCS coordinated with hospitals and changed the distribution plan for LLINs. As per the previous plan, the total target of LLIN distribution was 3,000 for treated and discharged dengue positive patients from hospitals. But due to the fall in patient/case influx in hospitals, the plan was shifted to distribution of LLIN to vulnerable and high-risk communities in the two target cities. In total 2,572 LLINs were distributed to the worst hit communities.

The data reported by the MNHSRC for epidemiologic week 45 (3 – 9 November 2019) and 46 (10 – 16 November 2019) showed a declining trend in the number of new dengue cases in all regions except Sindh. During week 46, the total number of new reported cases in Islamabad, Punjab, Khyber Pakhtunkhwa (KP), Baluchistan and Azad Jammu and Kashmir (AJK) were 664 compared to 1,347 cases reported during week 45, which is around 50 per cent reduction in cases. The declining trend in the number of new cases was evidence that outbreak surveillance, prevention and control measures had started showing results by November in most of the regions³.

PRCS regularly attended the coordination meetings with the national and district health administrations to keep up with the surveillance update and to adjust the programme strategy and implementation plan as and when needed.

Coordination with DoMC is in progress to establish task force with PRCS and other national partners for Dengue Outbreak response. Memorandum of Understanding (MoU) with DoMC and Task Force Terms of Reference (ToRs) development is in process. Once finalized, PRCS Task Force will conduct community survey in the same area where awareness raising activities were conducted and IEC material was distributed. Regular coordination with the Ministry of Health has proven fruitful both for PRCS and IFRC, which is why PRCS planned to manage 3,000 dengue cases through early screening and trained technical volunteers, however, due to the decline in cases and weekly surveillance, as shown by the epidemiological report of National Institute of Health (NIH), this target could not be achieved as per the initial plan. Kits will be handed over to DoMC to be used in next season.

Weekly surveillance and epidemiological reports from NIH were closely monitored and required help was sought from DoMC to plan activities accordingly. Surveillance reports for eight weeks were published by NIH, subsequently PRCS volunteers supported in disease surveillance, however, no new case was reported in the 27 hotspot locations during PRCS field implementation.

PRCS procured rapid diagnostic kits for screening and case management and arranged an orientation session in November 2019 for 12 CBVs to provide them with the essential knowledge and skills, in order to provide diagnostic and case management services at community level. As the number of cases reported had declined significantly in the hospitals by the time the kits had arrived, therefore they will remain in the PRCS medical warehouse, and will be used in the next possible peak season, with the advice of DoMC and Ministry of Health.

The procured LLINs were distributed among community members, however the rapid diagnostic kits couldn't be distributed since they arrived in May-June 2020 and by that time the need was no more. The handing taking over of the kits was delayed because of the movement restrictions due to COVID-19 situation in Pakistan.

The Director of DoMC has informed PRCS that currently there is no outbreak of Dengue cases in Rawalpindi\Islamabad area. Continuous surveillance is being carried out for detection of any cases which they expect to occur during the monsoon season around August. PRCS is in continuous coordination with DoMC, who have assured PRCS that they will utilize the diagnostic services if and when required. In view of the situation, it is suggested that the Dengue Testing Kits remain with PRCS till the end of Dengue season for their best utilization. Once the Dengue Testing Kits are utilized, the utilization report will be shared with IFRC. The expiry of these rapid diagnostic kits is till September 2023 and they will now be used by the Government health department.

² According to the [weekly field epidemiology report](https://www.nih.org.pk/wp-content/uploads/2020/02/03-FELTP-Pakistan-Weekly-Epidemiological-Report-Jan-13-19-2020.pdf) from the National Institute of Health, the dengue cases in November reported in ICT (Islamabad Capital Territory) and Punjab (where Rawalpindi is located) are 0 and 561 respectively. <https://www.nih.org.pk/wp-content/uploads/2020/02/03-FELTP-Pakistan-Weekly-Epidemiological-Report-Jan-13-19-2020.pdf>

³ <http://www.emro.who.int/fr/pandemic-epidemic-diseases/dengue/outbreak-update-dengue-in-pakistan-16-november-2019.html>
<https://www.nih.org.pk/wp-content/uploads/2020/02/04-FELTP-Pakistan-Weekly-Epidemiological-Report-Jan-20-26-2020.pdf>
<https://www.nih.org.pk/wp-content/uploads/2020/02/03-FELTP-Pakistan-Weekly-Epidemiological-Report-Jan-13-19-2020.pdf>

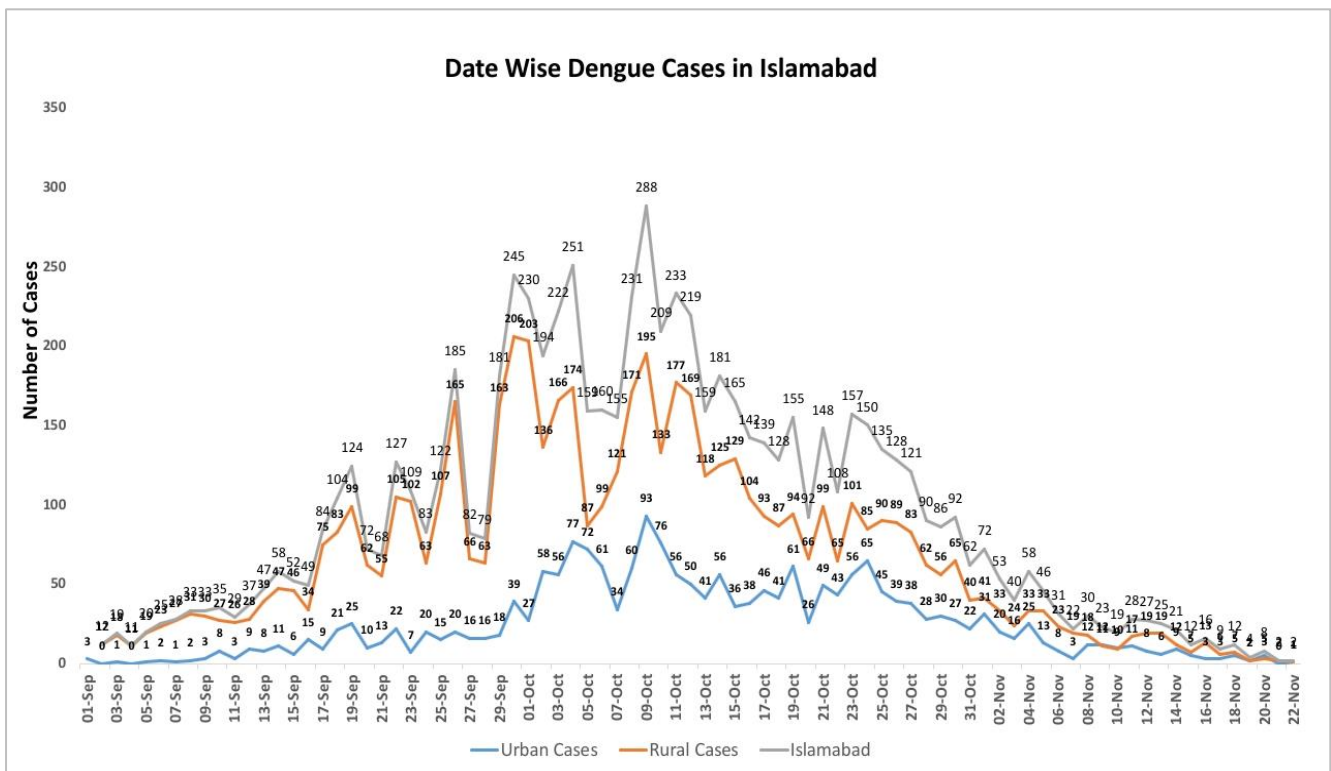


Figure 1: Date wise case management in Rawalpindi and Islamabad (September – November 2019) (Source: MNHSRC Epidemiologic Report)

Table 1: Province-Wise Dengue Situation Report as of 22 December 2019 (Source: MNHSRC)

Province	Dengue Cases (2019)			Dengue Deaths (2019)		
	1 Jan-20 Dec	21 Dec	Cumulative	1 Jan-20 Dec	21 Dec	Cumulative
Islamabad ⁴	13,924	0	13,294	22	0	22
Punjab	10,118	1	10,119	23	0	23
Sindh	16,657	28	16,685	46	0	46
Khyber-Pakhtunkhwa	7,082	0	7,082	0	0	0
KP Tribal Districts	794	0	794	0	0	0
Baluchistan	3,474	0	3,474	3	0	3
AJK	1,690	0	1,690	1	0	1
Gilgit Baltistan	0	0	0	0	0	0
Others	696	0	696	0	0	0
Total	53,805	29	53,384	95	0	95

Dengue fever and dengue hemorrhagic fever are the fastest emerging arboviral infections in Pakistan since 2005. From 1995 to 2004, only 699 dengue cases and six deaths were reported from three districts in the country. However, these numbers have dramatically increased over the years and have now reached 127,500 cases and 709 deaths respectively effecting 105 out of 154 districts/agencies/ territories in the country between 2005 to 2018. The disease epidemiology is complex in nature and patterns of disease transmission are influenced by many factors which include weather and environmental changes, vector species composition, behavior, geographic distribution, population dynamics, degree of immunity among local population and density, and time required for development of virus in vectors.

⁴ Numbers in Islamabad can be interpreted in view of the active surveillance initiated by the Dengue Control Cell in the M/o NHSRC and integration of government and Private Sector hospitals with the PITB dashboard. Every suspected patient in the capital is tested by highly sensitive NS1 antigen.

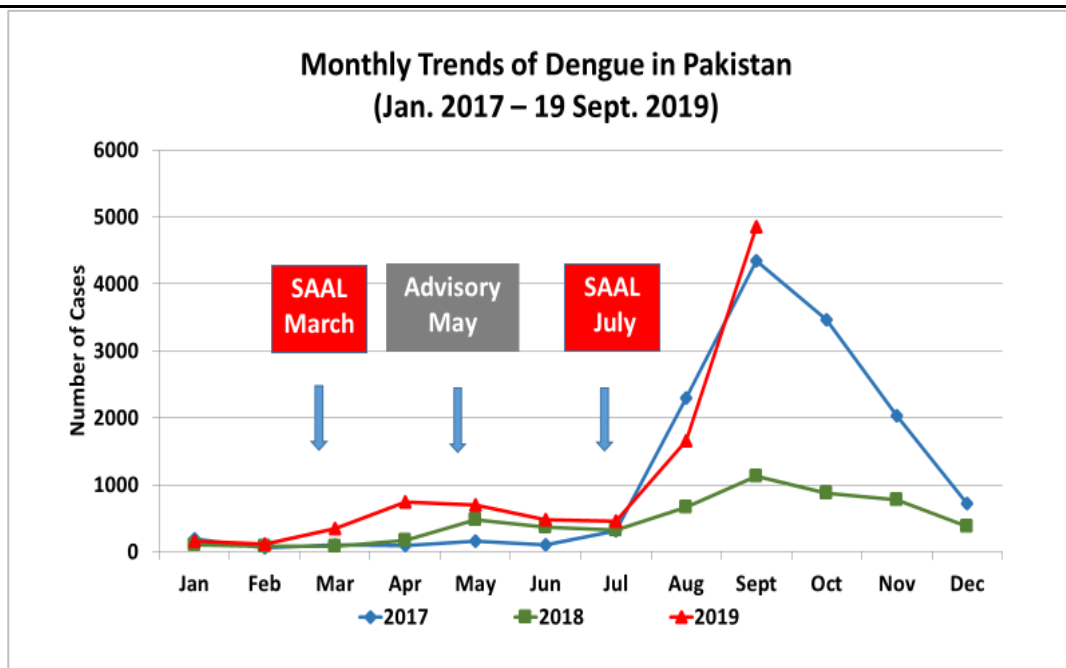


Figure 2: Two-year trend of Dengue in Pakistan (2017 – 19) (Source: Epidemiology and Disease Surveillance Division National Institute of Health (NIH), Islamabad *Seasonal Awareness and Alert Letter (SAAL))

The figure above shows a clear indication of disease outbreak in 2019 in comparison to 2017 and 2018. However, disease prevalence decreased significantly from March 2020 onwards, due to change in season and sensitized and aware communities. Dengue prevalence is predicted to be higher from July onwards i.e. peak season.

Challenges

- Visit to households, hospitals and universities were hindered in November 2019 because of the anti-government protests in Islamabad which lasted for two weeks. Islamabad’s main highway was blocked, making it difficult for staff and volunteers to travel between Rawalpindi and Islamabad, and sensitization activities were therefore temporarily called off due to security concerns.
- Owing to the lengthy procurement processes of PRCS, the procurement of items was delayed and also caused an extension for the project so that the relevant procurement of items and related financial processes could be completed.
- Since the number of new cases reported dropped significantly in November 2019, some households were reluctant to talk to the CBVs for sensitization activities. However, later the situation improved as CBVs focused more on the prevention measures, which are important for households to know when facing the possible peak season in the coming year.

Lessons Learned

- Community engagement is pertinent throughout the project timeline.
- External environment risk analysis needs to be conducted on weekly basis, especially in short duration projects such as this one.



Water, sanitation and hygiene

People reached: 224,333

Male: 109,923

Female: 114,410

Outcome 1: Dengue -related water, sanitation and hygiene improved

Indicators:	Target	Actual
# of households provided information on solid waste disposal practices	28,800	28,823

Output 1.1: Solid waste disposal to prevent vector breeding

Indicators:	Target	Actual
# of people sensitized on waste segregation, disposal in hospitals and use of garbage bins	210,270	224,333

Narrative description of achievements

Demographic status and survey of the hotspot areas of twin cities and consultations with DoMC indicated the dire need of community awareness and sensitization about effective disposal practices and waste segregation of garbage bins provided by Rawalpindi Development Authority (RDA) and Municipal Corporation of Islamabad (MCI). It was seen that garbage bins were not being disposed off on regular basis, and waste segregation was not controlled in hospitals.

From November 2019, CBVs were deployed to target communities for sensitization activities. 92 CBVs received training on water, sanitation and hygiene (WASH) related interventions including solid waste disposal and waste segregation practices. CEA activities were part of the training, as to how community members can be engaged throughout the project cycle and delivered key messages through door to door approach. Communities were sensitized regarding the importance of maintaining good solid waste disposal practices, while informing them of consequences if good practices are not adopted, such as breeding of mosquitos in filthy areas and spreading of virus.

A total of 28,823 HHs have received IEC material about dengue control/prevention measures and solid waste disposal practices through CBVs who were trained to practice effective communication and to give ample chances to the target HH members to ask questions regarding the information they have received. Below are some key messages imparted through the IEC material:

- Our Resolve – A dengue free Islamabad.
- To prevent mosquito breeding sites, empty vases once in a week.
- Dengue mosquitoes are mostly active in the morning and evening times so be vigilant and safeguard your family.
- Do not let clean water to be stored in spaces at your home and in neighboring areas.
- Use mosquito repellents in morning and evening times.
- The positive patients should use Paracetamol, Oral Rehydration Salts (ORS) and water as per doctor's instructions.



Figure 3: WHO approved IEC material distributed during surveillance activities and community awareness campaigns about mosquito breeding sites in October 2019 in Islamabad and Rawalpindi

Challenges

- Due to the anti-government protests by a leading political party in Islamabad, activity implementation was hindered, and targeted households could not be covered, as per the initial set targets in DREF EPOA. However, the action plan was revised later for greater outreach per day.
- DREF timeline was extended to complete financial procedures once procurement activities were completed and goods receiving receipts to replenish existing stock of LLIN in PRCS inventory were final.

Lessons Learned

- Contingency planning should be made part of the operational strategy for better planning and preparation.
- Stock replenishment should be continued as a regular practice as it will allow to deal with any emergency situation with complete preparedness.
- PRCS procurement processes need to adopt speedy methods for emergencies. Additionally, all team members need training on collaborative efforts to meet deadlines.
- Identification of local technical and administrative capacity is pertinent for or prepositioning of relevant medical items that meet the WHO/IFRC standards f (for high occurrence of such).



Protection Gender and Inclusion

People reached: 224,333

Male: 109,923

Female: 114,410

Outcome 1: National capacity building and organizational development objectives are facilitated to ensure that National Societies have the necessary legal, ethical and financial foundations, systems and structures, competences and capacities to plan and perform

Indicators:	Target	Actual
<i>The operation demonstrates evidence of addressing the specific needs to ensure equitable access to disaster response services</i>	Yes	Yes

Output 1.1: National Societies have effective and motivated volunteers who are protected

Indicators:	Target	Actual
<i>NS ensure improved equitable access to basic services, considering different needs based on gender and other diversity factors</i>	Yes	Yes

Narrative description of achievements

Specific measures have been taken in order to ensure that the operation complies with the minimum standards for PGI. For example, the beneficiary selection criteria for repellent and LLIN distribution was shared with the CBVs to ensure inclusion of diverse population groups. The priority was that all activities must follow the criteria and ensure no discrimination on the basis of gender, ethnicity, age, disability, people living with HIV/AIDS and/or other factors that may increase vulnerability. Female staff members and volunteers were involved in the assessment, trainings, distribution process and sensitization activities in the community. Among the trained 92 CBVs, 30 of them were female. Additionally, female volunteers were continuously engaged in field activities during the operation to ensure equitable access to basic services, and to increase the acceptance level for different groups from the community.

Challenges

The project activities were conducted during daytime, and most of the women of the household received awareness messages, IEC material and mosquito repellants regarding dengue transmission and prevention, while their male counterparts were away for work. However, it was difficult to gather information about gender wise data of each household, since most women were reluctant to mention the number of male and female members in their household. This behavior is quite understandable owing to personal confidentiality and in terms of ethical perspective, thus out of respect for their privacy CBVs did not push the community members to reveal this information.

Lessons Learned

Engagement of PGI focal person from both IFRC and PRCS is mandatory throughout the project life cycle, for planning

of activities with a focus on PGI, to address the challenges and subsequent data management.

Strengthen National Society

Outcome S1.1: National Society capacity building and organizational development objectives are facilitated to ensure that National Societies have the necessary legal, ethical and financial foundations, systems and structures, competences and capacities to plan and perform.

Indicators:	Target	Actual
# of NS branches that are well functioning in the operation	1	1
Output S1.1.1: National Societies have effective and motivated volunteers who are protected		
Indicators:	Target	Actual
# of volunteers involved in the operation provided with briefing/orientation	70	92
# of Emergency Dengue Control Coordinator Centre established at PRCS- NHQ	1	1

Narrative description of achievements

A total of 92 volunteers were briefed and imparted orientation sessions regarding the Dengue response operation and its objectives by the PRCS National Head Quarter (NHQ) staff. The 92 volunteers were trained which is more than the target number i.e. 70 volunteers. The number of volunteers was increased in order to ensure the pool has enough manpower to support the activities. As a result, the NHQ has established a Dengue Response Team with the support of Youth and Volunteer Department and have developed a coordination mechanism in order to ensure that communication between Government health departments and NHQ is smooth and regular meetings are convened. Furthermore, DoMC has prepared a concept note to deal with vector borne diseases in Pakistan and has included PRCS/IFRC in their task force as partners. The modalities are in the process of being finalized.

Challenges

- Identification and selection of community-based volunteers was a challenge considering the change in their demographic details.
- Terminology used 'Emergency Dengue Control Coordinator Centre' established at PRCS-NHQ needs to be rephrased, since center establishment is basically referring to the 'Dengue Response Team' which has been established with the support of Youth and Volunteer (Y&V) Department and coordination with DoMC and Department of Health. This team sits within the Y & V department at PRCS-NHQ and are familiar with all stakeholders.

Lessons Learned

- Volunteers database, especially in terms of their geographical information, should be updated on regular basis in order to deploy them according to their current locations.
- Dengue Response team's ToRs should have documentation and reporting component to receive regular feedback on disease epidemiology. At the same time there is a need establish similar teams at PRCS branches level for national level coordination. Team ToRs are a live document and these points will be added by the PRCS health team

International Disaster Response

Outcome S2.1: Effective and coordinated international disaster response is ensured

Indicators:	Target	Actual
Does the operation demonstrate evidence of effective and coordinated international disaster response?	Yes	Yes
Output S2.1.1: Effective response preparedness and NS surge capacity mechanism is maintained		
Indicators:	Target	Actual
# of RDRT deployed	1	0

Output S2.1.2: Supply chain and fleet services meet recognized quality and accountability standards		
Indicators:	Target	Actual
<i>Procurement is carried as per Sphere and IFRC standards and items replenished in PRCS warehouses within the operation timeline.</i>	100% compliance	100%
Narrative description of achievements		
<p>Coordinated by the IFRC APRO, the deployment of Regional Disaster Response Team (RDRT) delegate was not possible due to Pakistan visa issues. The process of candidate selection was completed, but unfortunately, he was unable to receive the Pakistani visa and thereby could not the support Dengue DREF operation in Pakistan.</p> <p>The procurement of mosquito repellents was completed by December 2019 and the LLIN procurement was completed by late March 2020 as per the agreed IFRC standard procurement procedures and the IFRC and Sphere Standards within the operation timeline.</p>		
Challenges		
RDRT resource couldn't come to Pakistan for support due to visa issues.		
Lessons Learned		
In-country RDRT resource presence is pertinent with respect to public health and emergencies experience.		

Influence others as leading strategic partner		
Outcome S3.2: The programmatic reach of the National Societies and the IFRC is expanded.		
Indicators:	Target	Actual
<i>National appeal launched</i>	Yes	No
Output S3.2.1: Resource generation and related accountability models are developed and improved		
Indicators:	Target	Actual
<i># of lesson learned workshop conducted</i>	1	1
Narrative description of achievements		
<p>A national appeal is launched in case there is limited capacity/resources of relevant authorities to respond to the outbreak, due to the extent and scale of disaster as well as, if there is a need for a long term and large-scale intervention. But according to the National Institute of Health reports, the dengue cases had started to decrease by November 2019, soon after DREF was launched in ICT (Islamabad Capital Territory) and Rawalpindi. Therefore, no need was felt for launching a national appeal for the dengue cases in Islamabad and Rawalpindi.</p> <p>A Lesson Learned Workshop (LLW) was convened on 20 January 2020 after the completion of filed activities. PRCS and IFRC engaged staff, volunteers and other relevant participants for a review of the DREF operation, its learnings and recommendations for future similar interventions. Key challenges, best practices and recommendations for future interventions were discussed in detail and were documented in a report.</p>		



Lesson Learnt Workshop, 20 January 2020 (Photo: PRCS)

Following are the key recommendations garnered from the LLW:

- Intervention time should be appropriate for dengue prevalence which is during peak of summers.
- Left over stock should be used for next outbreak
- Dengue response should be part of contingency planning
- The team leaders should be trained/skilled volunteers
- Implementation timeline should be increased.
- Community and schools should be informed prior to the activities.
- PMER participation should be enhanced throughout the DREF which includes monitoring visit, validation of provided data and qualitative reports.
- Security briefing and insurance coverage for volunteers should be ensured as security precautions.

Challenges

Availability of regular epidemiological data for disease surveillance at national level is a challenge.

Lessons Learned

There is a need to enhance coordination with NIHS and DoMC to strengthen disease surveillance data.

D. Financial Report

A total of CHF 124,337 has been allocated to PRCS to support the needs of people in hot spot areas of Islamabad and Rawalpindi, through awareness campaign and distribution of repellents and LLINs. The total expenditure recorded by end of operation was **CHF 91,305 (73 per cent spent of budget)**, leaving a balance of **CHF 33,032**. The variation in the expense and budget is mainly due to the variance occurred in AP048 (Integrated services for National Society), which is the RDRT deployment cost to provide technical support to NS, however, activity/deployment couldn't be completed because of visa issues. Second reason is delay in commencement of the filed activities due to political protests in the twin's cities and subsequent underspending in daily peridium of CBVs

The balance funds will be returned to the DREF pool. For further details on expenditure, please refer to attached final financial report. [click [here](#)]

The major donors and partners of the Disaster Relief Emergency Fund (DREF) include the Red Cross Societies and governments of Belgium, Britain, Canada, Denmark, German, Ireland, Italy, Japan, Luxembourg, New Zealand, Norway, Republic of Korea, Spain, Sweden and Switzerland, as well as DG ECHO and Blizzard Entertainment, Mondelez International Foundation, and Fortive Corporation and other corporate and private donors. The IFRC, on behalf of the national society, would like to extend thanks to all for their generous contributions

Contact information

Reference documents



Click here for:

- [Previous Appeals and updates](#)
- [Emergency Plan of Action \(EPoA\)](#)

For further information specifically related to this operation please contact:

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For IFRC Resource Mobilization and Pledges support:

- Alice Ho, resource mobilization in emergencies coordinator; email: PartnershipsEA.AP@ifrc.org

For Performance and Accountability support (planning, monitoring, evaluation and reporting enquiries)

- Siew Hui Liew, PMER manager; email: siewhui.liew@ifrc.org

How we work

All IFRC assistance seeks to adhere to the **Code of Conduct** for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations (NGO's) in Disaster Relief and the **Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere)** in delivering assistance to the most vulnerable. The IFRC's vision is to inspire, **encourage, facilitate and promote at all times all forms of humanitarian activities** by National Societies, with a view to **preventing and alleviating human suffering**, and thereby contributing to the maintenance and promotion of human dignity and peace in the world.

The IFRC's work is guided by Strategy 2020 which puts forward three strategic aims:



Save lives,
protect livelihoods,
and strengthen recovery
from disaster and crises.



Enable **healthy**
and **safe** living.



Promote **social inclusion**
and a culture of
non-violence and **peace**.

DREF Operation

FINAL FINANCIAL REPORT

Selected Parameters			
Reporting Timeframe	2019/10-2020/5	Operation	MDRPK017
Budget Timeframe	2019/10-2020/3	Budget	APPROVED

Prepared on 22/Jun/2020

All figures are in Swiss Francs (CHF)

MDRPK017 - Pakistan - Dengue Outbreak

Operating Timeframe: 11 Oct 2019 to 31 Mar 2020

I. Summary

Opening Balance	0
Funds & Other Income	124,337
DREF Allocations	124,337
Expenditure	-91,305
Closing Balance	33,032

II. Expenditure by area of focus / strategies for implementation

Description	Budget	Expenditure	Variance
AOF1 - Disaster risk reduction			0
AOF2 - Shelter			0
AOF3 - Livelihoods and basic needs			0
AOF4 - Health	69,545	48,504	21,041
AOF5 - Water, sanitation and hygiene			0
AOF6 - Protection, Gender & Inclusion			0
AOF7 - Migration			0
Area of focus Total	69,545	48,504	21,041
SF11 - Strengthen National Societies			0
SF12 - Effective international disaster management	54,792	42,801	11,991
SF13 - Influence others as leading strategic partners			0
SF14 - Ensure a strong IFRC			0
Strategy for implementation Total	54,792	42,801	11,991
Grand Total	124,337	91,305	33,032

DREF Operation

FINAL FINANCIAL REPORT

Selected Parameters			
Reporting Timeframe	2019/10-2020/5	Operation	MDRPK017
Budget Timeframe	2019/10-2020/3	Budget	APPROVED

Prepared on 22/Jun/2020

All figures are in Swiss Francs (CHF)

MDRPK017 - Pakistan - Dengue Outbreak

Operating Timeframe: 11 Oct 2019 to 31 Mar 2020

III. Expenditure by budget category & group

Description	Budget	Expenditure	Variance
Relief items, Construction, Supplies	59,700	42,478	17,222
Clothing & Textiles	6,000	4,590	1,410
Medical & First Aid	53,700	37,888	15,812
Logistics, Transport & Storage	2,000	689	1,311
Transport & Vehicles Costs	2,000	689	1,311
Personnel	34,708	38,768	-4,060
National Society Staff	3,908		3,908
Volunteers	30,800	38,768	-7,968
Workshops & Training	2,600	995	1,605
Workshops & Training	2,600	995	1,605
General Expenditure	17,740	2,802	14,938
Travel	12,500	339	12,161
Information & Public Relations	5,100	2,130	2,970
Office Costs	100	276	-176
Communications	40		40
Financial Charges		56	-56
Indirect Costs	7,589	5,573	2,016
Programme & Services Support Recover	7,589	5,573	2,016
Grand Total	124,337	91,305	33,032