Expanding Support to MALARIA CONTROL Interventions in High Endemic areas in Pakistan

JUL 2016 to DEC 2017

PROJECT COMPLETION REPORT

NRSP
National Rural Support Programme

DMC

The Global Fund
To Fight AIDS, Tuberculosis and Malaria

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1. List of Acronyms:

ACD	Association for Community Development
ABER	Annual Blood Examination Rate
ASD	Association for Social Development
ACTs	Artemisinin-Based Combination Therapy
API	Annual Parasite Incidence
ASD	Association for Social Development
BHU	Basic Health Unit
BCC	Behavior Change Communication
DHIS	District Health information System
DMC	Directorate of Malaria Control
FATA	Federally Administered Tribal Areas
FPHC	Frontier Primary Health Care
GTS	Global Technical Strategy
IRS	Indoor Residual Spraying
LLINs	Long Lasting Insecticidal Nets
MC	Microscopy
MDGs	Millennium Development Goals
MIS	Malaria Information System
NFR	New Funding Request
NRSP	National Rural Support Program
PF	Plasmodium Falciparum

PR	Principal Recipient
PV	Plasmodium Vivax
RDT	Rapid Diagnostic Test
SDGs	Sustainable Development Goals
SPR	Slide Positivity Rate
SR	Sub-Recipients
TGF	the Global Fund
TPR	Test Positivity Rate
WHO	World Health Organization

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3.Executive Summary

Directorate of Malaria control program Directorate of Malaria Control (DOMC) is implementing the malaria control program and is funded through national resources. However, these are insufficient to achieve the required coverage of interventions in the target population. This gap requires additional support of donors.

Directorate of Malaria control program Sindh has identified fourteen districts of Sindh where the Malaria burden has been reported higher since last couple of years under Global Fund (GFATM) /New Funding Model Grant for which NRSP (National Rural Support Program) Hyderabad has been selected as Sub recipient (SR) for GFATM NFM to implement the Malaria Control intervention in five highly/moderate endemic districts of Sindh includes district (Badin, Umerkot, Tando Mohammad Khan & Sajawal). NRSP is already working in Thatha with NRSP's mandate is to alleviate poverty by harnessing people's potential and undertake development activities in Pakistan.

Now the goal of the project is “By 2017” reduced the Malaria burden by 60% in total 14 high endemic Districts of Sindh Pakistan and the main objective is to ensure and sustain more than 80% coverage for the provision of quality assured early diagnosis and prompt treatment services to population at risk in targeted Districts by 2017. This coverage will also include pregnant women, under 5 children and febrile patients attending treatment centers; and actively involve teachers, religious and community leaders, CBOs, and healthcare providers especially LHWs.

NRSP is implementing Project Expanding Coverage of Malarial Control Intervention in Highly Endemic Districts of Pakistan District Umerkot are also among these districts consisting huge outbreak of Malaria. Training of Public health care providers on Malaria Case Management aims to provide Capacity building to the Medical officers of approved Health facilities for Malaria Diagnoses and treatment on Malaria Case Management especially on the basis of latest research and National guideline. Humanitarian services in these sectors will be harmonized with the private & government sector to remove the current parallel, and unsustainable, NRSP supported in diagnosis process, Treatment services, supply chain management and all the capacity building related services. Comprehensive disease specific treatment is mandatory for controlling the disease burden and planning to combat the disease. It is also required to eradicate malaria with National guideline and reducing Morbidity and Mortality burden, misconceptions and outdated approaches. In order to have provided capacity building to public health care providers on case management of Malaria and to update the Health care providers on modern research based.

4. Background and Introduction:

Pakistan has a population of 180 million inhabitants of which 177 million are at risk of malaria. With 3.5 million presumed and confirmed malaria cases annually. Malaria in Pakistan is typically unstable and major transmission period is post monsoon i.e. from August to November. Major vector species are Anopheles culicifacies and A. stephensi, both still susceptible to the insecticides currently being used. The

widely distributed causative organisms are Plasmodium falciparum and Plasmodium Vivax. Vivax malaria still dominates the transmission though significant rise in the more lethal form falciparum is observed in Baluchistan and Sindh. There is significant drug resistance (Chloroquin and fansidar resistance) prevalent throughout the country where the levels in the western border areas are very significant. The malariogenic potential of Pakistan has a negative impact on its socioeconomic growth and productivity, as the main transmission season is spiraled with the harvesting and sowing of the main crops (wheat, rice, sugar cane).

The key underlying risk factors for malaria endemicity and outbreaks in Pakistan include; unpredictable transmission patterns, low immune status of the population in lowest endemicity areas, poor socioeconomic conditions, mass population movements within the country and across international borders with Iran and Afghanistan, natural disasters including floods and heavy rain fall in a few areas, lack of access to quality assured care at the most peripheral health settings, low antenatal coverage and internally displaced population (IDPs) crisis in the agencies and districts along western border. About 700,000 people (National Disaster Management Authority) have recently been displaced from high endemic zone of North Waziristan to neighboring districts of KPK due to conflict situation. Epidemiologically, Pakistan is classified as a moderate malaria endemic country with a National API averaging at 1.66 (MIS, 2016) and wide diversity within and between the provinces and districts. Plasmodium Vivax and Plasmodium Falciparum are the only prevalent species of parasites detected so far, with Vivax being the major parasite species responsible for >80% reported confirmed cases in the country.

4. Global Situation

Since last decades significant progress has been made in fighting against malaria. According to the latest estimates, globally between 2000 and 2015, malaria case incidence has reduced by 41% and malaria mortality rates by 62%. At the beginning of 2016, malaria was considered to be endemic in 91 countries and territories, down from 108 in 2000. Most of the change can be attributed to the wide-scale deployment of malaria control interventions. Despite this remarkable progress, malaria continues to have a devastating impact on people's health and livelihoods. Updated estimates indicate that 212 million cases occurred globally in 2015, leading to 429 000 deaths. Most of the malaria cases in 2015-2016 according in the WHO Africa region 90% South East Asia region 7%,Eastern Mediterranean region 2%, about 4% of estimated cases globally are caused by PV, but outside African continent this proportion increase to 41%,most malaria cases caused by PV in south east Asia region 58% according to WHO, eastern Mediterranean region 61%and the WHO African region 12%.about 76%of estimated malaria cases in 2015 occurred in just 13 countries Ethiopia, India ,Indonesia and Pakistan) accounted for 78% of PV cases. 4.1 billion people at risk of malaria in 2015 and 237 million people at high risk, followed by the WHO malaria cases in three countries Myanmar 2%,indoneshia 9%, India 89% and others 0%.

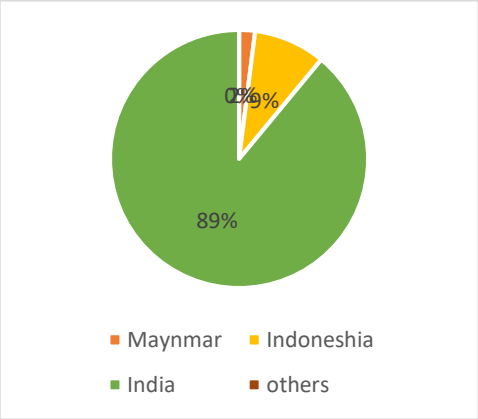

Fig: 1. Countries which share cases of Malaria followed By WHO 2015

5. Situation in Pakistan and Sindh.

According to a recent survey of the WHO, Pakistan is included among the top countries that have accounted 81 percent of the estimated deaths globally due to Malaria. Earlier in 2015, more than 212 million and 429,000 deaths by Malaria were recorded across the world. In Pakistan, Malaria is second most reportedly disease with 4.5 million cases reported each year. Totally 39 districts of Baluchistan and Sindh are called the most risk areas. Around 65 percent of the country's population is passing their lives in rural areas where no health facility is available and Mostly the small children are being infected as 65 percent of children and 35 percent of adults are affected. Whereas Malaria transmission is unstable in Pakistan with the highest number of cases reported during the monsoon season. Despite its high incidence, malaria is still a poorly resourced, poorly funded and an uncontrolled disease especially in far-flung areas. According to 2015 reportedly in Sindh Malaria Control Program has recorded 44,731 malaria cases across the province last year, while no death was reported from the disease in the province. According to the yearly data released by Malaria Control Programme, a total 44,731 malaria cases had been reported across the province in 2015, out of which 216 were detected from Hyderabad, 472 from Tando Allahyar, 894 from Matiari, 229 from Tando Muhammad Khan, 1,537 from Badin, 9,150 from Khairpur, 2,413 from Shaheed Benazirabad, 2,444 from Naushro Feroze, 3,225 from Mirpurkhas, 1,185 from Umerkot and 1,357 from Tharparkar. The report further stated that 835 malaria cases were reported from Sanghar, 1,053 from Sukkur, 1,553 Shikarpur, 1,852 from Ghotki, 1,686 from Jacobabad, 1,338 from Kashmore, 3,041 from Larkana, 1,491 from Kamber, 1,221 from Dadu, 514 from Jamshoro, 1,667 from Karachi, 4,537 from Thatta and 821 from Sujawal district respectively. While no any death was reported from malaria last year. The majority of malaria cases have been recorded from Khairpur, Thattha, Larkana and Mirpurkhas districts of Sindh province. The programme management also distributed the mosquito nets in high-risk areas of the province.

6. Project Area: Thatha, Sujawal, Badin, Tando Muhammad khan and Umerkot.

Goal:

To reduce the malaria burden by 60% in 66 endemic districts of Pakistan.

7. Objectives:

- To reduce burden of Malaria by 60% in 42 highly endemic districts of Pakistan
- To enhance access of population at risk to quality assured early diagnosis and prompt treatment
- To enhance technical and management capacity of malaria control program for improved planning, management and monitoring of malaria control intervention
- To improve health seeking behaviors and practices of target communities in malaria endemic districts through enhanced community awareness and participation

8. Programmatic Achievements:

In during July-2016 to Dec-2017, intervention Under Global funded grant, collaboration with DoMC, NRSP two districts Thatha and Sujawal LLINs strategy included pregnant women during their Antenatal care (ANC) visits through the ANC clinics. Around 10400 LLINs were distributed in 2017 through 'ANC' clinics at Thatha and Sujawal.

A total **868** of personnel were trained under various trainings that took place in 2017, this included trainings of Health care providers in case management both complicated and uncomplicated, MIS and outbreak response and RDT and MC training of technicians in malaria diagnosis.

Monthly cluster meetings were conducted by NRSP staff in five districts to ensure optimal coordination, ownership and smooth flow of data from health facilities to District/provincial programs. The given target of the cluster meetings was well achieved by NRSP 99%.

In Dec 2016-2017 total of **5542** personnel received advocacy sessions regarding preventive and curative services pertinent to malaria. These are in trained conducted community awareness sessions and a total of **118694** members from the communities were reached.

9. Health system Overview:

In 2017, NRSP's districts covered **3611649** Population in remote areas of Sindh in population of five districts according to 2017 census total population of Thatha is **979, 817, Sujawal, 781967, Umerkot, 1073146**, Badin, **1136,636** and Tando Muhammad khan**. 619,900**.The interventions were primary and

secondary level health facilities in rural areas which is mostly DHQ, THQ BHUs and RHCs upgraded private clinic also in rural communities. Total **291** included **216** public and **75** Private RDT in which total

RDT centers are **239** and microscope centers are **52.**
In during Dec 2016-2017 NRSP were fully functional health facilities in remote areas included private RDT centers.

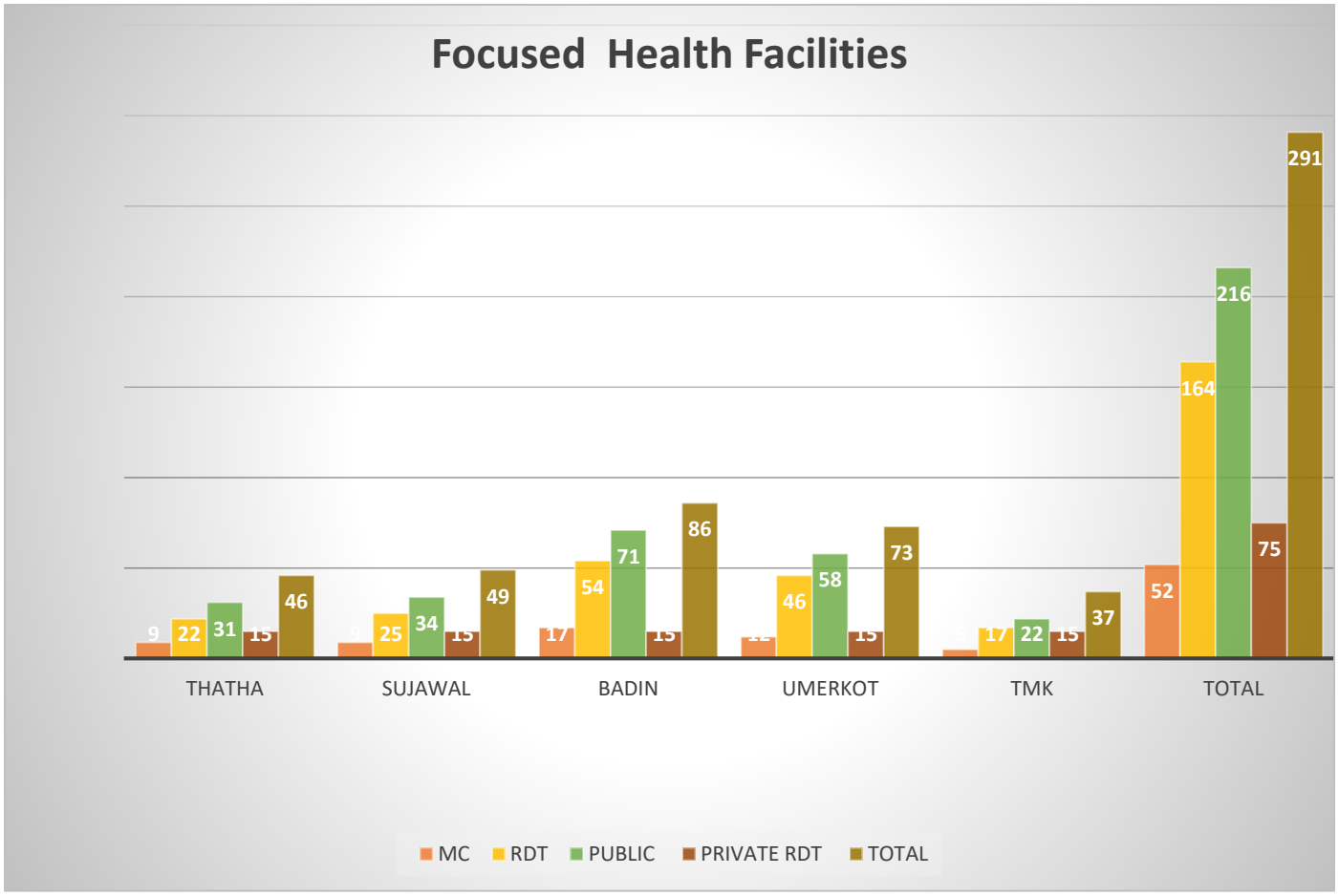

Fig: 2. Functional health facilities under NRSP districts in 2017

10. Overall Findings:

During the 2017 malaria parasites detected were increases through the diagnosis and treatment as comparison in last three decades.

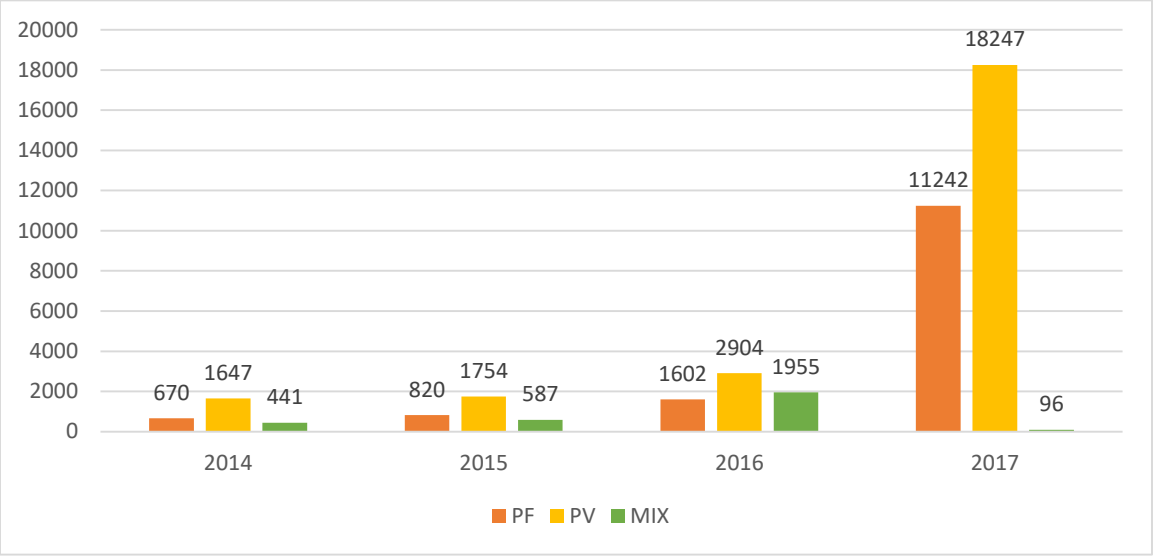

Fig: 3.comparison of reported malaria cases in 2014 to 2017

11. API, ABER and TPR

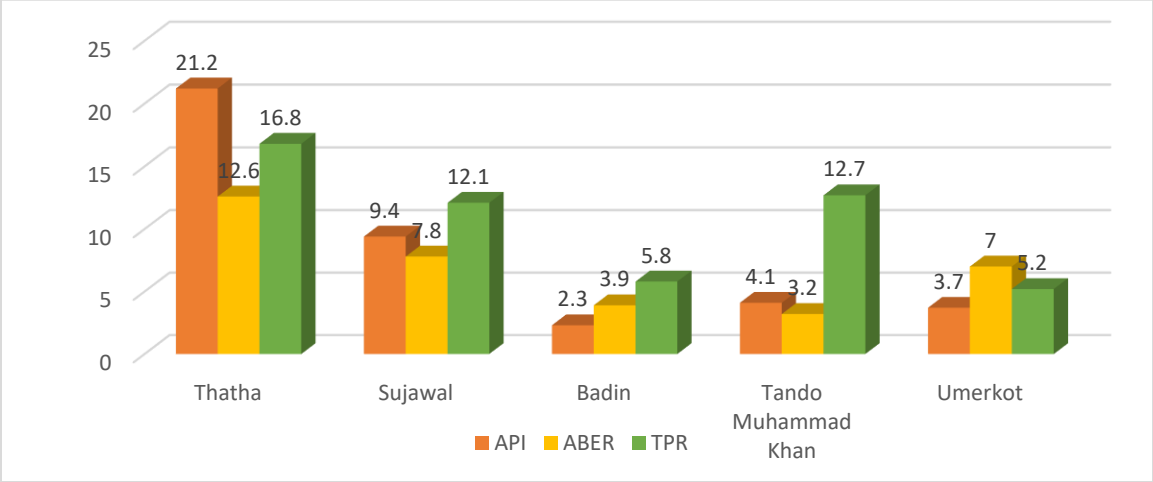

Fig: 4. District wise API, ABER, and TPR ration against reported cases.

During 2016 –Dec 2017 according to health facilities reported mostly PF cases were highest numbers 11895 from Thatha, whereas PV found in highest number of positive cases were 6322 from Sujawal, 8524 from Badin, 7315 from Umerkot and 2156 from Tando Muhammad khan 2056

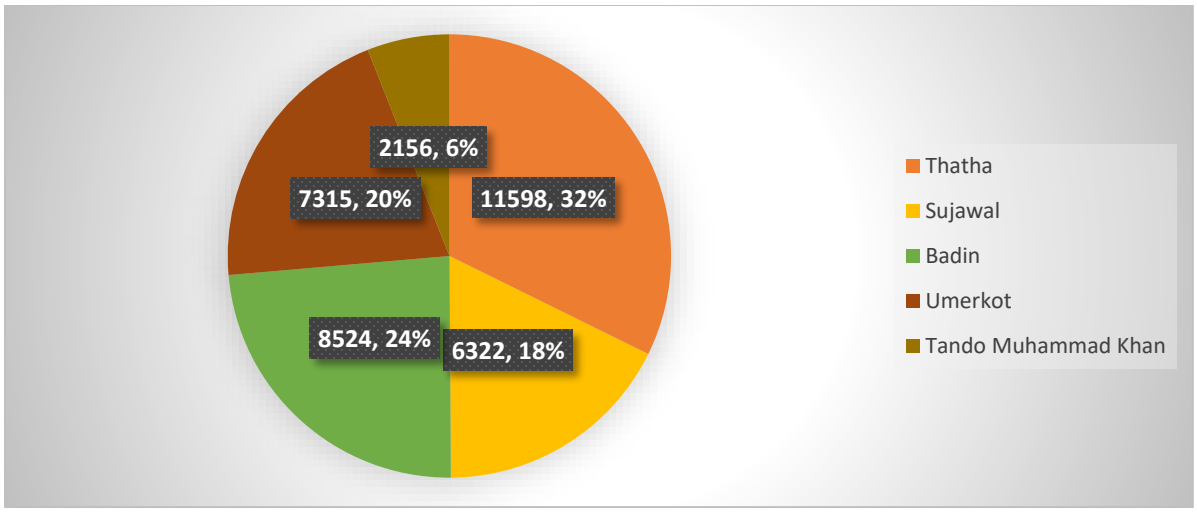

Fig: 5.District wise Positive cases in July-2016 to Dec-2017

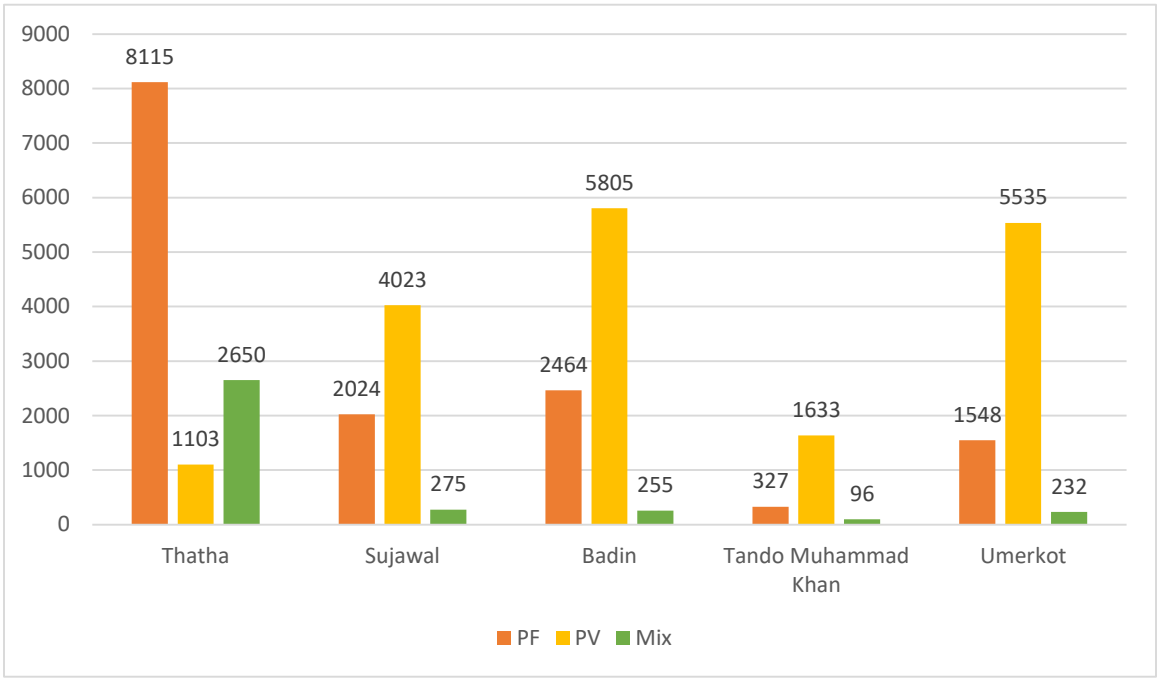

Fig:6. District wise reported PF, PV&Mix cases of Malaria in 2017.

12. Malaria Project Interventions:

12.1. Diagnosis:

In the duration of 2017 NRSP with the collaboration of directorate of Malaria control Sindh, has been established 134 BHUs as under in PPHI they were functional RDT centers, 82 Govt: health facilities as functional in Microscopy centers, 75 were private clinics they were functional RDT centers all are functional in NRSP districts, through microscopy centers has properly diagnosis of malaria with the all protocols and usages of chemical reagents, slides and picker in continue to these are in microscopy centers. Which is detected two species plasmodium falciparum and plasmodium Vivax.

As well as rapid diagnosis test is also provide in all public and private health facilities in RDT centers, which are regularly Availability of RDT kits in whole centers. According to lab technician demand In July 2016 to Dec 2017 RDT kits were 235856 distributed to all public and private centers.

Microscopists blood examine of malaria parasite in district

12.2. Treatment

Another side when detected cases were proper treatment of Malaria through Trained Medical officers and Female medical Officers by using tools of National guide line prepared by WHO (world Health Organization).Besides treating cases of Plasmodium Vivax the danger type of Malaria, Falciparum Malaria was also treated with provision of ACT doses and prevented patients from Cerebral Malaria which is lethal type of Malaria causing fits in patients specially Children.

As of Dec 2017 NRSP has supplied AMDs to 291 health facilities. The process of supplies were followed by monthly cluster meetings. During in 2017 ACT were 18500 distributed in need base to all health facilities in GFATM NRSP districts, AMDs included CQ,PQ, ACTs, inj.

LLINS. (Long Lasting Insecticides Bed Nets)

An LLIN is a mosquito net impregnated with insecticide. The insecticide is cleverly bound within the fibers that make up the netting and is 'slow released' over a 4-5 year period. Hence 'long lasting' insecticidal nets therefore provide two levels of protection. First as a mechanical barrier against the bites of malaria-carrying mosquitoes and second as a means of killing mosquitoes on contact with the insecticide. These

nets are safe for children as the quantity of insecticide a child might ingest by licking their hands after touching the net are small enough not to cause any harm.

12.3. LLINs Distribution.

Distribution of LLINS (Long Lasting Insecticides Bed Nets) through ANC Clinics:-

- Total 10400 LLINs were distributed during the project period through ANC clinics in Public Health Care Facilities of two districts Thatha and Sujawal.
- These bed nets were distributed by WMOs (Women Medical Officers) and LHVs to Pregnant Women on their ANC visit.
- This activity not only prevented pregnant women (The high Risk Group for Malaria) from Malaria but created habit of pregnant women for regular visits to sitting HCPs (WMOs and LHVs) on public health facilities.
- Due to this activity the number of ANC was also significantly increased in those health facilities where LLINS were distributed and also reflected in DHIS reports presented in DHPMT (District Health & Population Management Team) meetings.
- Support was also provided to Directorate of Malaria Control Program Sind in IRS spray activity in 05 UCs of District Thatha only.

12.4. Capacity Building:

Enhance the skills and capabilities of health care services providers in their malaria public and private health care centers, in which involved the malaria diagnosis and treatments through protocols by directorate of malaria control and WHO standards, all the trainers were health departments sides. A total **868** of personnel were trained under various trainings that took place in 2017, this included trainings of Health care providers in case management both complicated and uncomplicated, MIS and outbreak response and RDT and MC training of technicians in malaria diagnosis.

Case Management Trainings:

These are two types of trainings one of complicated malaria case management and second one was uncomplicated case management, during this tenure trained personal were Doctors MO and FMOs. All trained personals details are below:

District	Male	Female	Total
Thatha	7	1	8
Sujawal	7	1	8
Umerkot	8	2	10
Badin	10	0	10
Tando Muhammad Khan	5	0	
Total	**37**	**4**	**40**

Table: 1. No of Participate at Severe Complicated malaria case management Training of service providers (MOs,FMOs)

District	Male	Female	Total
Thatha	25	6	31
Sujawal	32	0	32
Umerkot	71	3	74
Badin	90	3	93
Tando Muhammad Khan	32	6	38
Total	**250**	**18**	**268**

Table: 2.No: of Participate at Uncomplicated malaria case management Training of service providers (MOs, MOs)

These are training about RDT and Microscope, trained personal were 52 in Microscope training.

District	Male	Female	Total
Thatha	9	0	9
Sujawal	9	0	9
Umerkot	12	0	12
Badin	17	0	17
Tando Muhammad Khan	5	0	5
Total	**52**	**0**	**52**

Table: 3 No: of participates in Microscopy Training

District	Male	Female	Total
Thatha	21	2	
Sujawal	27		
Umerkot	61		
Badin	72		
Tando Muhammad Khan	32		
Total	**213**	**2**	**215**

Table:4 No: of participates at Training of RDT

District	Male	Female	Total
Thatha	46	1	47
Sujawal	46	0	46
Umerkot	73	0	73
Badin	88		88
Tando Muhammad Khan	39		39
Total	**292**	**1**	**293**

Table: 05.No: participate at MIS& Outbreak response training

An overview of both public and private service providers were trained in July 2016-2017 below figures:

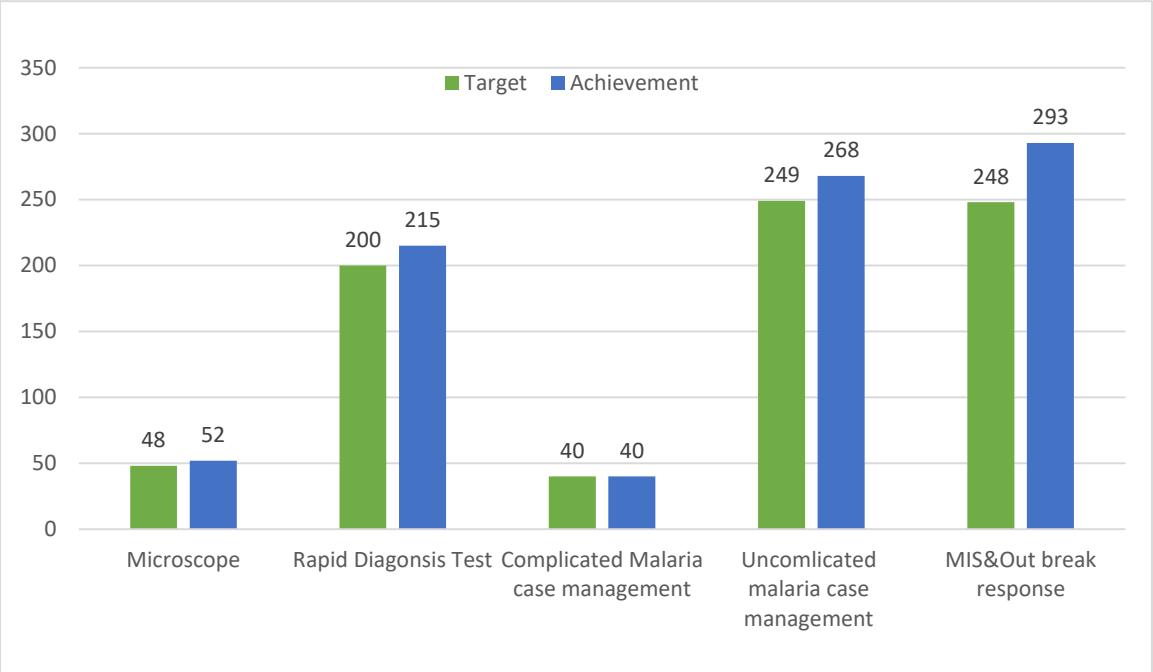

Fig: 7.Training Target Vs Achieved in July 2016 – Dec 2017

12.5. Behavior Communication Change (BCC)

During this tenure NRSP districts conducted advocacy events which were participated LHWs, CBOs and LSOs, representatives.

BCC activities included advocacy events with community based activists including Lady Health Workers (LHWs), Community Based Organizations (CBOs), Non-Governmental Organizations (NGOs), religious leaders, local elders and elected representatives for community awareness to enhance preventive and curative services utilization in the districts. These trained LHWs, CBOs/NGOs and community representatives then conducted the awareness sessions at community and health facility level.

In 2017, 5542 personnel participated in the advocacy sessions regarding preventive and curative services pertinent to malaria. These participants then conducted community awareness sessions and a total of 118694 members from the communities were reached

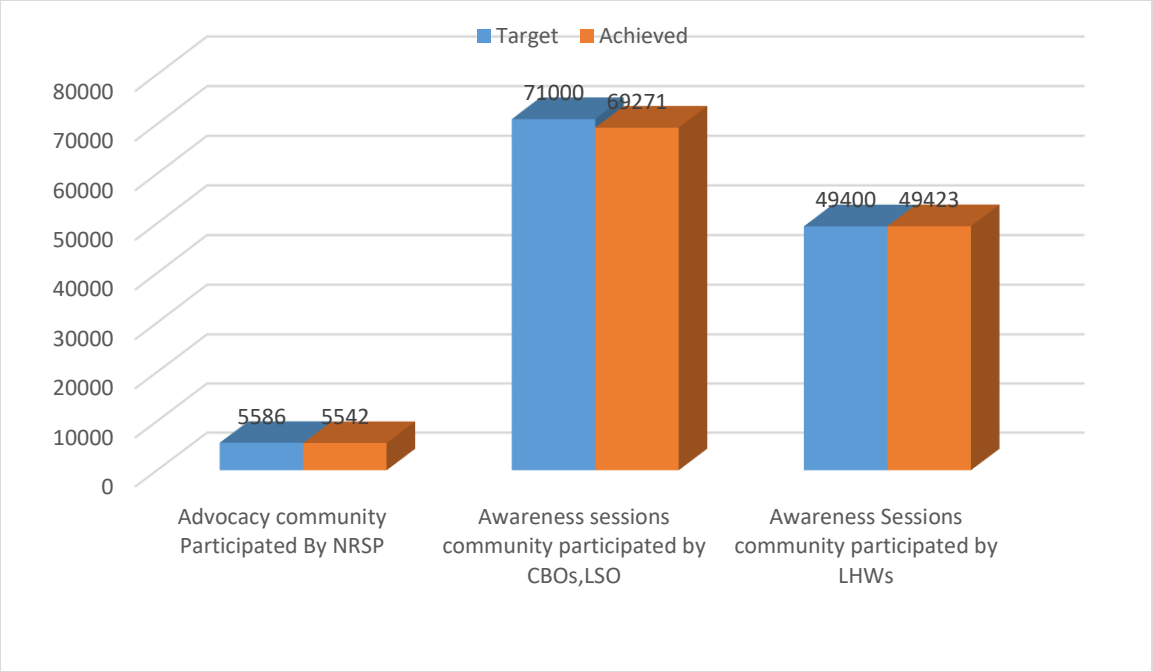

Fig: 8.BCC sessions Targets Vs Achieved in 2017

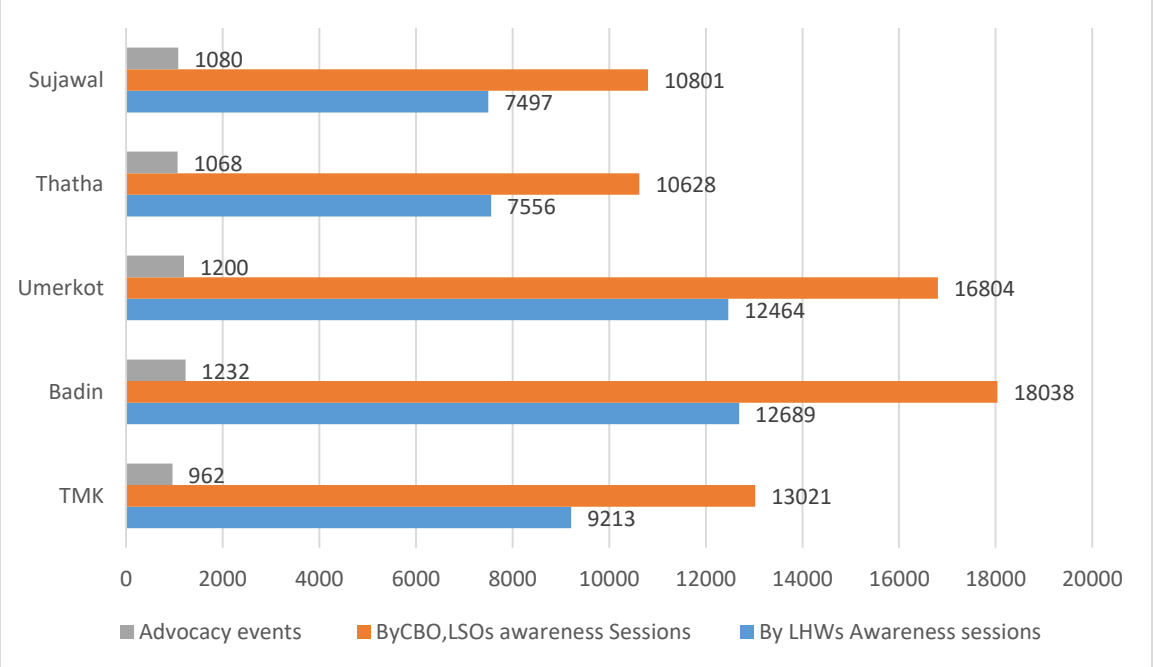

Fig: 9.District wise BCC Awareness sessions in 2017

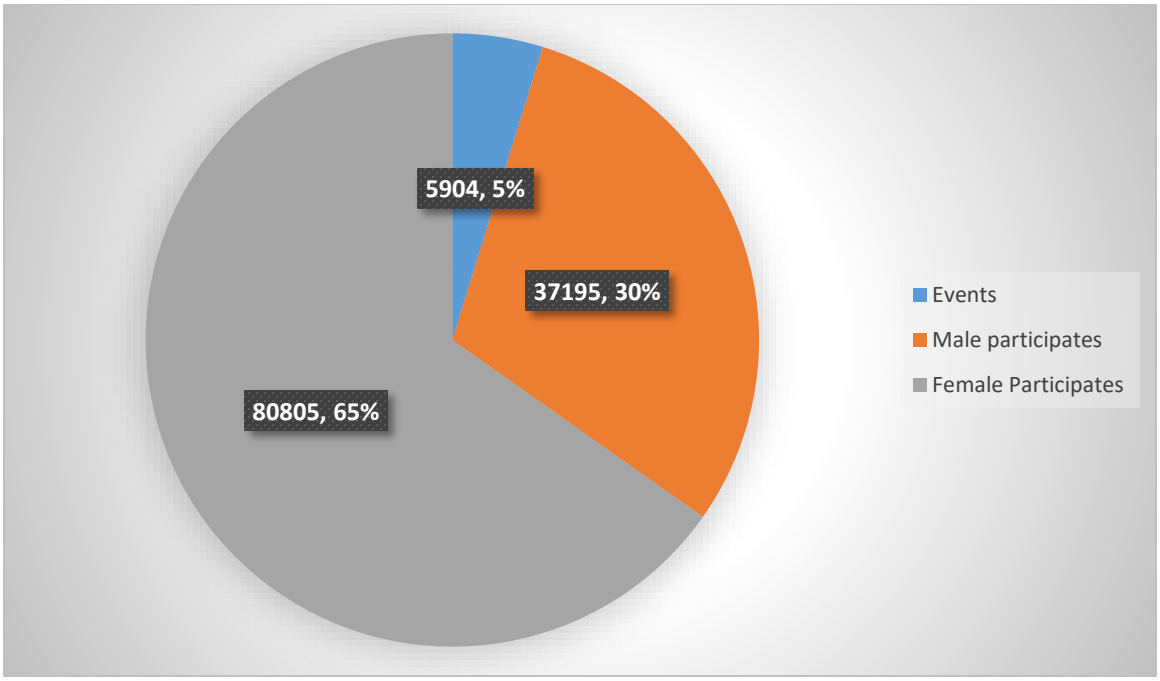

Fig: 10.Breakup of participants BCC Awareness sessions in during 2017.

12.6. Cluster Meetings

Cluster meetings were conducted by districts coordinators in their respectable districts, these meeting are set to involve the all stakeholders and to review of the overall progress and resolve the issues and challenges at the district level. In these meetings are focal persons of health facility bring to FM -1 and stock registers along with monthly FM-2 reports, The district management unit and NRSP team validated FM-2 reports data with the information from registers. These meetings also helps in resolving mostly issues in stock outs and maintain the FM-1,2 registers and issues discussed regarding the Behavior change communication activities, which are all discussed and determined**.**

12.7. Monitoring Visits

During the 2017 district coordinators visited health facilities in regularly basis in their respectable districts to ensure the followed all diagnosis protocols accordingly.

12.8. Challenges and Issues:

- Health Department has high hopes from NRSP
- Continues transfer of Medical Officers and Health technicians
- Women Medical Officers are not trained on Uncomplicated Malaria case management

Photo Gallery

Training of Doctors on Uncomplicated Malaria case management at gymkhana Badin

Training on Uncomplicated Malaria case management at Umerkot

Participants are doing experiment during in training on RDT

Distribution of certificates by DSM PPHI at TMK

Cluster meetings are conducted at Badin and Tando Muhammad Khan districts

DHO & NRSP distrcit team visited in BCC Awareness sessions conducted by LSOs member & NRSP Team district Tando Muhammad khan.

Microscopists are receiving Microscope by PD, Dr Nahid Jamali and PM NRSP DR: Shahid Ujjan during cluster meeting at TMK

Monitoring Visits of HFs by District coordinators TMK & Umerkot.

Monitoring visits HFs by LFA delegation in Thatha district 2017.

MEDIA COVERAGE

Rural areas need trained health staff, equipment: Experts

By The Sindh Times - Feb 26, 2017

UMERKOT Feb 26: Health facilities in rural areas need trained staff, equipment and supplies to assure the proper diagnosis of diseases and overcome the issue of blidn therapy; speakers expressed their views on the occasion of training completion event organized on use of rapid diagnostic tests (RDTs) for malaria event by Rural Support Programme (NRSP) held here at Umerkot. Dr. Karmoon DHO Umerkot said that there is need to train the staff of health department on proper operation of equipment provided for diagnosis of diseases. He emphasized on the importance of training and also said that there is need of continuity of supplied to provide service.

Dr. Anwar Ali Shah DDO RHC/Focal Person shared that NRSP has provided anti malaria drugs to 58 health facilities of district Umerkot and also providing training on MIS tools, uncomplicated malaria case management and RDTs. This is basic requirement of health care providers after getting these trainings healthcare providers will get support to get diagnosed the cases and treat as per the results of tests.

Ali Nawaz District Coordinator NRSP Umerkot said that for enhancing access for population at risk for early diagnosis and prompt treatment, this training is necessary. To enhance technical and management capacity of health staff, we need such more trainings for improved planning, management and monitoring of malaria control intervention. To improve health seeking behaviors and practices of target communities in malaria endemic through enhanced community awareness and participation, he added. NRSP is working with 58 health facilities of district Umerkot; 13 microscopy centers and 45 rapid diagnostic test centers. NRSP is implementing project with collaboration of The Global Fund to Fight AIDS, Tuberculosis and Malaria. The speakers were of the point of view that by increasing number of facilities to diagnose the diseases will support in overcoming the issue of blind therapy. The event was organized at Alam Iqbal University Campus main hall at Umerkot in which 23 technical staff of health department participated.