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**Directorate of Malaria Control
National Data Management Unit**

*Ministry of National Health Services Regulations & Coordination
Government of Pakistan*

**Malaria Disease Surveillance Report (FM-4)
P-4 (April to June 2017)**

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1 INTRODUCTION

Directorate of Malaria Control is implementing Malaria Control interventions in 47 highly endemic districts of Pakistan through 5 Sub-Recipients (SRs). The suspected cases are screened through Microscopy / RDT at health care delivery outlets. Confirmed Malaria cases are being treated according to National treatment guidelines. The data is aggregated on FM-2 form by the Malaria focal persons and is sent to the district, at district level District Management Unit (DMU) compiles the data on FM-3 form and sends it to province / region. The provincial DMU accumulate the information on FM-4 and sends it to National DMU.

2 FM-4 PROVINCIAL MALARIA REPORTING FORM

The FM-4 reporting format has following variables:

1. Reporting completeness
2. Proportion of suspected malaria cases receiving malaria diagnostic test.
3. Clinical cases
4. Species wise confirmed cases
5. Test Positivity Rate
6. Sex & age distribution of reported malaria cases
7. Proportion of malaria cases admitted & referred.
8. Proportion of sever malaria cases admitted & treated.

The soft copies of FM-4 reporting forms for the period (P-4) received from the provincial DMUs. Data of each variable were compiled in Excel and is attached as Annexure 1.

3 FINDINGS

Following are the results generated from the data shared with the national team

3.1 REPORTING COMPLETENESS

Total of 1925 diagnostic centers (Microscopy and RDT) have been reported as functional in 47 districts / agencies with the support of The Global Fund (TGF) grant. A total of 5775 reports were expected to be received during the period P-4, out of which 5595 (97%) reports were received from the health facilities.

The details are as shared in table 1

| Province / Region | # of Diagnostic centre | # expected reports to be received | # of reports received | Completeness of reports % |
|-------------------|------------------------|-----------------------------------|-----------------------|---------------------------|
| KP | 1279 | 3837 | 3807 | 99 |
| Balochistan | 2276 | 6828 | 6405 | 94 |
| Sindh | 1138 | 3414 | 3372 | 99 |
| FATA | 1197 | 3591 | 3552 | 99 |
| Total | 5890 | 17670 | 17136 | 97 |

3.2 PROPORTION OF SUSPECTED MALARIA CASES RECEIVING MALARIA DIAGNOSTIC TEST

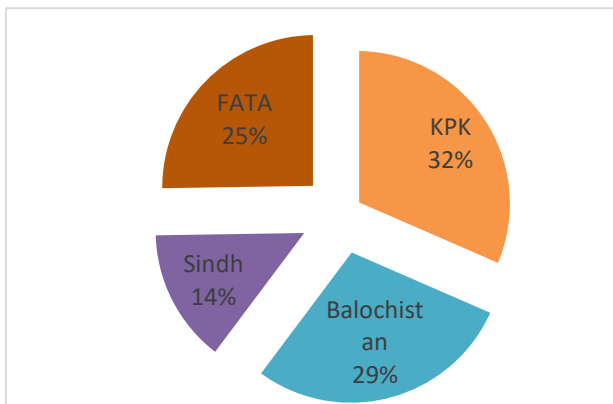
A total of 470610 malaria suspected cases were reported in TGF supported health facilities. 99.92% suspected cases were screened through microscopy / RDT. It is appreciable that almost all the suspected malaria cases are getting diagnostic services.

| Province / Region | Suspected cases | Screened | Proportion of screened cases |
|-------------------|-----------------|---------------|------------------------------|
| KP | 136951 | 136950 | 100% |
| Balochistan | 126508 | 126158 | 99.7% |
| Sindh | 116608 | 11608 | 100% |
| FATA | 92543 | 90543 | 100% |
| Total | 470610 | 470259 | 99.92% |

3.3 MALARIA CASES

In TGF supported districts 49698 malarial patients were treated with anti-malarial drugs. 0.17% cases received treatment on clinical grounds. It is evident that in TGF supported districts almost all the patients received anti-malarial drugs after confirmatory diagnosis. The details of clinical cases and species wise confirmed cases are as under:

| Province / Region | No. of cases received anti-malarial drugs | Clinical cases | P.F | P.V | Mix | Total |
|--------------------|---|----------------|------|-------|------|-------|
| KP | 15658 | 12 | 251 | 15189 | 206 | 15646 |
| Balochistan | 14307 | 68 | 2550 | 9665 | 2024 | 14239 |
| Sindh | 7200 | 0 | 1552 | 5093 | 555 | 7200 |
| FATA | 12533 | 6 | 369 | 11863 | 295 | 12527 |
| Total | 49698 | 86 | 4722 | 41810 | 3080 | 49612 |



Out of the total 49612 confirmed cases highest proportion was recorded in KPK 32% followed by Balochistan 29%, FATA 25% and Sindh 14% as shown in the pie chart

Figure 1: Confirmed cases reported Province Wise

During the reporting period (P-4) *P. vivax* cases remain dominant 41810, with high burden in KPK followed by FATA and Balochistan. The total 4722 PF cases reported from all the TGF supported districts, out of which 54% cases are from Balochistan followed by Sindh 33% and FATA 8%. The KP shared 5% of the cases. Despite the availability of ACTs and repeated trainings of Health care providers on malaria case Management the burden of PF cases particularly in Balochistan needs further data validation and to find out the possibly reasons of not obtaining the desired results

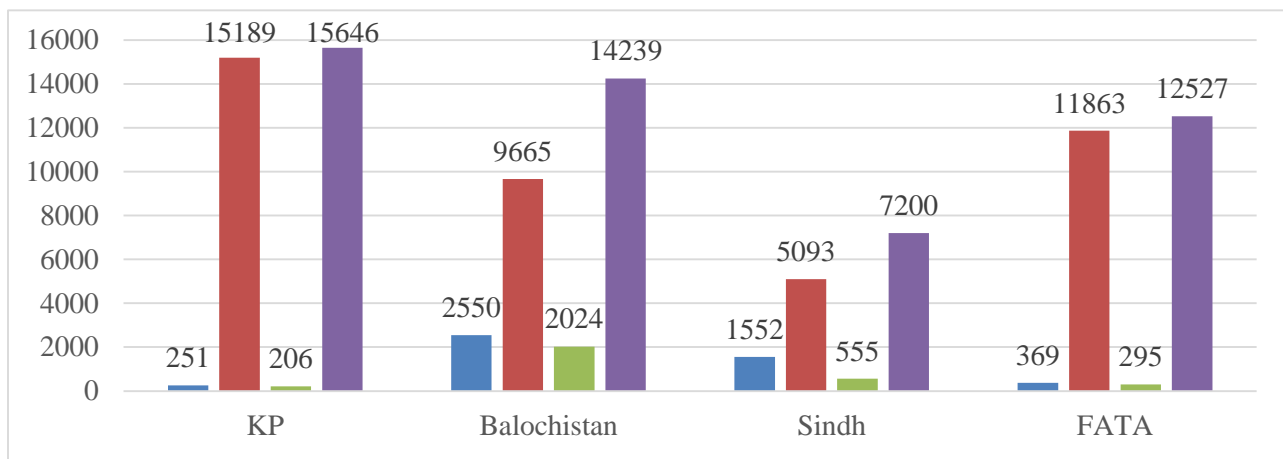


Figure 2: Cases according to species Province wise

3.4 TEST POSITIVITY RATE

The Malaria Test Positivity Rate (TPR), defined as the proportion of diagnostic tests that are positive for malaria, and is one of the important indicator of malaria morbidity. The advantages of TPR are that it inherently incorporates only laboratory-confirmed cases, provides a clear denominator and can provide a rapid and inexpensive means of assessing malaria morbidity in a The overall Test Positivity Rate (TPR) during the period P-4 is 10.5%. TPR in FATA is 13.8% followed by KPK, Balochistan, and Sindh 11.4%, 11.3% and 6.2% respectively.

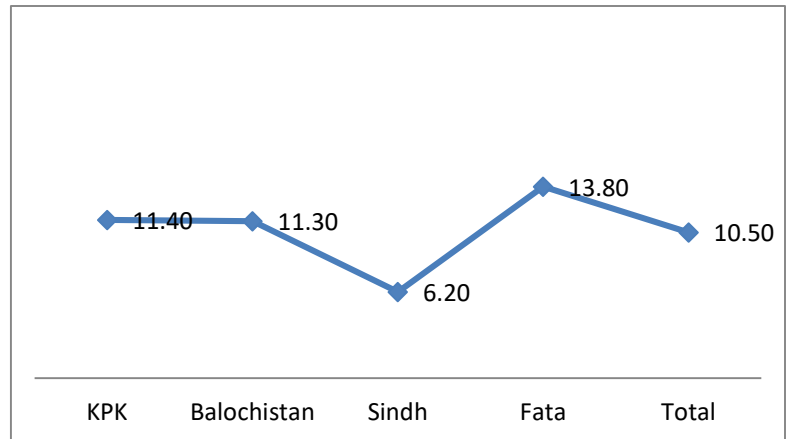


Figure 3: TPR in Provinces

3.5 SEX & AGE DISTRIBUTION

Of the total malaria cases reported during the period the male female ratio is 55.3:44.7. In FATA the ratio of female patients are 49.8 followed by KPK 46.7, Balochistan 42.2 and Sindh 40.4% .The overall proportion of children less than 5 years is 15.8%. The Sindh, Balochistan, KPK and FATA population utilizing health care facilities where diagnostic testing is available.

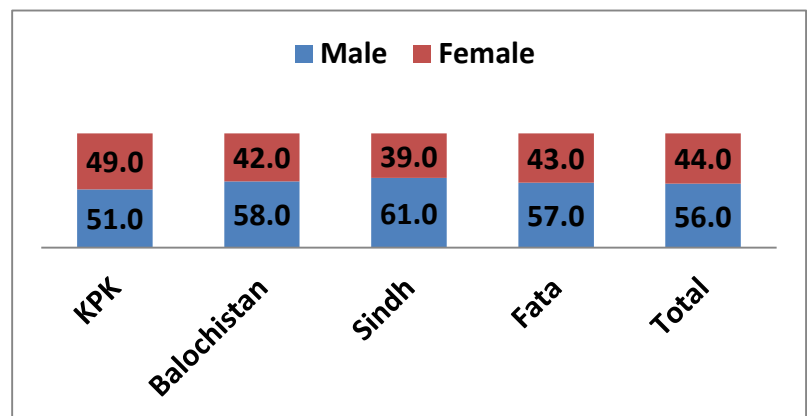


Figure 4: Sex and Age distribution

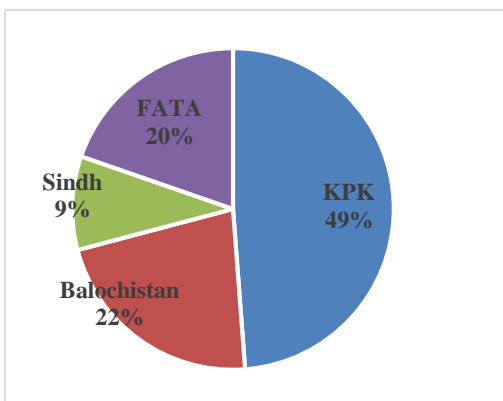


Figure 5: Province wise pregnant women treated as per national guidelines

3.6 PREGNANT WOMEN

Total 584 pregnant women were treated as per national treatment guidelines, which are 2.7% of the total female cases reported from all the TGF targeted districts. Of the total pregnant ladies 49% pregnant women from KPK and 20% from FATA, 22% from Balochistan and 9% from Sindh visited the health facilities

3.7 TREATMENT

The data in the section of treatment seems imperfect. It is not clear whether the antimalarial drugs prescribed are the total number of tablets or courses.

In the section **ACTION TAKEN** data has also errors; the number of admitted cases are not matching with the column of Malaria admissions in the section of **OPD, ADMISSIONS & DEATH**
