

NATIONAL VECTOR BORNE DISEASE CONTROL PROGRAMME (NVBDCP)



The National Vector Borne Disease Control Programme (NVBDCP) is an umbrella programme for prevention and control of Vector borne diseases. Earlier different Vector Borne Diseases were covered under separate National Health Programmes, presently 6 Vector Borne Diseases are being covered under NVBDCP.

1. **Malaria**
2. **Dengue**
3. **Chikungunya**
4. **Japanese Encephalitis**
5. **Lymphatic Filariasis**
6. **Kala Azar**

MALARIA: Malaria is caused by the bite of an infected Anopheles mosquito. The **Anopheles** sits at an angle on walls and on hard surface and thus can be recognized with naked eye. Anopheles prefers clean water collections like puddles, ponds, wells, small canals, water tanks etc. for breeding. Anopheles mosquitoes bite at night. Some bite shortly after sunset while others bite later, around midnight or the early morning. Only the female Anopheles mosquito bites as she requires blood meal (protein) for laying eggs in her life time, while the male mosquito sips plant sap for survival.

MALARIA (PUNJAB 2008 TO 2016)

Epidemiological Profile - Punjab

Year	Total Malaria Cases	Pf Cases	ABER	API (< 1)	SPR	Pf%
2008	2494	38	11.05	0.09	0.08	1.52 %
2009	2955	35	10.89	0.11	0.10	1.18 %
2010	3476	70	11.30	0.12	0.11	2.01 %
2011	2660	64	11.01	0.09	0.06	2.41 %
2012	1689	43	10.20	0.059	0.01	2.55 %
2013	1760	31	10.37	0.061	0.07	1.76 %
2014	1036	11+3	10.83	0.036	0.03	1.35%
2015	596	12	10.4	0.020	0.02	2.01%
2016	692	08	9.1	0.024	0.026	1.16%

The State of Punjab has low case load of Malaria. The API (Annual Parasite Incidence) of Malaria in the State is well below 1.0, the target. State has been able to keep ABER (Annual Blood Examination Rate) above the target. The target of ABER was more than 10 till 2015. The State had revised the target of ABER in 2016 to 7.0.

Proportion of Pf (falciparum Malaria) is very low in the State. Vivax malaria constitutes 97-99% of the total cases of malaria.

District Wise Malaria Cases

District	Total Positive Malaria Cases				
District	2012	2013	2014	2015	2016
AMRITSAR	28	22	53	33	51
BARNALA	2	13	20	15	10
BATHINDA	57	160	187	52	90
FARIDKOT	249	172	106	38	38
F.G.SAHIB	12	5	1	1	0
FAZILKA	31	34	21	19	7
FEROZEPUR	13	16	10	17	17
GURDASPUR	10	24	14	10	12
HOSHIAPUR	38	27	22	20	43
JALANDHAR	57	32	10	21	22
KAPURTHALA	10	5	2	2	1
LUDHAINA	197	210	85	57	83
MANSA	328	503	194	90	81
MOGA	8	3	9	2	19
PATHANKOT	1	0	4	0	0
PATIALA	94	79	43	90	44
RUPNAGAR	9	6	1	7	4
SAS NAGAR	130	88	29	55	109
SBS NAGAR	15	5	7	1	3
SANGRUR	100	57	29	10	15
SH. MUKATSAR SAHIB	233	243	151	28	16
TARN TARAN	67	57	38	28	27
PUNJAB	1689	1761	1036	596	692

Signs and Symptoms of Malaria

Typical: Sudden onset of high fever with rigors and sensation of extreme cold followed by feeling of burning, leading to profuse sweating. The febrile paroxysms may occur every alternate day. Headache, body ache, nausea, etc. may be the associated features.

Atypical: In atypical cases, classical presentation as mentioned above may not manifest. Hence, any fever case without any other obvious cause in the endemic areas during transmission season may be considered as malaria. However, none of the symptoms exclude malaria with certainty therefore a trained clinician has to judge and ensure whether they constitute any other obvious cause.

Activities being undertaken in Punjab for Prevention and Control of Malaria:

- 1. Surveillance: Active and Passive**
- 2. Early Diagnosis & Prompt Treatment (EDPT)**
- 3. Indoor Residual Spray**
- 4. Urban Malaria Scheme(UMS)**

1. Surveillance:

Malaria surveillance connotes the maintenance of an on-going watch/ vigil over the status of malaria in a group or community. The main purpose of surveillance is to detect changes in trends or distribution in malaria and other vector borne diseases in order to initiate investigative or control measures. The ultimate objective of malaria surveillance is prevention and control of malaria in the community.

Surveillance is of two types under NVBDCP:

a) Active Surveillance: Under this, the fortnightly domiciliary visits are made by MPHWS (M)/ ASHA for active search of all fever cases and blood slides are prepared and sent to the laboratory for confirmation of the cases. If found positive for Malaria, MPHWS (M)/ASHA provides full radical treatment.

b) Passive Surveillance: Under Passive Surveillance, blood slide of a fever case is made when he/ she attends the OPD of a health centre, for confirmation of Malaria.

Malaria surveillance includes laboratory confirmation of presumptive diagnosis, finding out the source/ site of infection and identification of all cases and susceptible contacts and still others who are at risk in order to prevent further spread of the disease.

2. Early Diagnosis & Prompt Treatment (EDPT):

EDPT is the main strategy of malaria control - radical treatment is necessary for all the cases of malaria to prevent transmission of malaria. Chloroquine is the main anti-malaria drug for uncomplicated malaria. Treatment of Malaria is recommended in the State as per the National Malaria Drug Policy 2013 issued by GOI.

3. Indoor Residual Spray: Since Malaria has declined in the State so the area for IRS has also decreased in the previous years. As per sensitivity and susceptibility tests done in the State, vectors are more sensitive to Malathion 25% wdp than DDT 50%, so Malathion 25% wdp is being used.

At present the strategy in the State is to do IRS (Indoor Residual Spray) in all those villages which have API >1. As per epidemiological data of 2016, 65 villages in the State have API >1.

4. Urban Malaria Scheme: Urban Malaria Scheme (UMS) was launched in 1971 by GOI under Modified Plan of Operation (MPO) which was designed to tackle the malaria load in both urban and rural areas in the country simultaneously. Under MPO, it was decided to initiate antilarval and antiparasitic measures to abate the malaria transmission in urban areas. The activities undertaken to control malaria in towns was named as Urban Malaria Scheme which was approved during 1971. UMS was started in the State of Punjab in 1977-78 in 5 towns namely Amritsar, Ludhiana, Ferozepur, Jalandhar and Patiala. Three more towns i.e. Malerkotla, Bathinda & Kapurthala were added in the scheme in 1980-81. In 1987-88, five more towns i.e. Rajpura, Nabha, Jagraon, Hoshiarpur and Gurdaspur were included in UMS. In the year 2008, 8 new towns namely Sangrur, Barnala, SAS Nagar, Phagwara, Khanna, Faridkot, Malout and Tarn Taran were included in Urban Malaria Scheme after getting approval from GOI. Under this scheme the GOI supplies the material in kind i.e. Larvicides for eliminating mosquito larvae. Now, Urban Malaria Scheme is operational in 21 towns of Punjab.

Although UMS is approved in 21 towns of the State, entomological surveillance is being undertaken in 40 towns of the State from where dengue and other vector borne diseases are being reported with internal adjustment of the staff.