

## **National Vector Borne Diseases Control Programme**

The National Vector borne Diseases Control Programme deals with vector borne diseases namely Malaria, Filariasis, Japanese Encephalitis, Chikungunya and Dengue Fever prevalent in Goa.

### **Malaria**

Malaria problem in Goa is predominantly due to the construction activity, cases occurring all round the year. The construction sites offer favourable breeding ground for mosquitoes and there is the presence of parasite in migrant workers coming from malaria endemic states. Anti malaria activities being performed by the programme include – Early Detection and Prompt Treatment (EDPT) of cases. Integrated Vector Control measures, Behaviour change communication strategies, capacity building and enforcement of provisions of Public Health Act.

EDPT is performed through active, passive, mass and contact parasitic surveillance. The blood of the patients is screened for malaria parasites by preparing the blood smears on the glass slides. Also Rapid Diagnostic kits for Plasmodium Falciparum are introduced in all the Health Centres/ Hospitals for prompt detection of falciparum cases. The delay in approaching the physician to take necessary treatment may result in complications and death due to P.falciparum. After confirmation of every malaria positive case, he/she is given radical treatment with appropriate medicines depending on the type of malaria detected. The facilities for detection/treatment of malaria are available at all the health centres/hospitals at the periphery.

### **In case of any type of fever:**

- Get the blood examined for malaria at the nearest Health Centre and thus ensure early detection and prompt treatment.
- Take all the medicines administered and complete the course for complete cure.
- Prevent creation of new potential mosquito breeding sites and eliminate existing ones by i) installation of mosquito proof overhead water storage tank/sump ii) observing dry day once a week for open cement tanks, iron drums, water containers etc iii) avoiding water stagnation in and around the premises in any

form and iv) removing/destroying tyres, coconut shells, bottles and other discarded utensils/material.

- Prevent mosquito contact/bite by screening doors/windows, and by using repellants, proper clothing and using mosquito bed nets during sleep at night. Pregnant women and children should use insecticide treated mosquito nets for prevention specially in malaria prevalent areas.

### **Filaria:**

Units of National Filaria Control Programme located at four urban towns viz Panaji, Margao, Vasco and Mapusa deal with Filaria disease. In order to detect the filarial cases, parasitic surveillance is carried out during night in these towns and necessary treatment is given for filarial positive. Anti larval measures against mosquitoes are being carried out by these units. Night survey for micro filarial are also conducted by the respective CHC/UHC/PHC. National Filaria day is observed on 11<sup>th</sup> November every year since 2004 as a strategy to eliminate Filaria by 2015. The Mass Drug Administration with DEC tablets is done to ensure that the entire eligible population receive these tablets. Morbidity management of Lymphatic Filariasis is also another strategy of this elimination programme.

### **Japanese Encephalitis/Dengue/Chikungunya Fever**

Japanese Encephalitis/ Dengue/Chikungunya Fever are other vector borne diseases reported in Goa. These cases are very sporadic. All Health Centers are instructed to keep a vigil on the report of such cases, investigate and undertake necessary disease surveillance in their respective areas. As far as Dengue and Chikungunya is concerned, the role of community is very vital. Because, Aedes aegypti – the vector is container breeder and are in most of the man made breeding sites in their residential/commercial/any other premises. They are domestic/peri domestic breeders. The community has to a) remove/destroy man-made breeding sites such as tyres, bottles, discarded coconut shells, utensils, ice cream cups, plastic/metallic containers, water tanks etc., and b) avoid water stagnation and observe emptying, drying and refilling of water tanks, drums etc once a week. The facilities for blood testing for Japanese Encephalitis/Dengue/Chikungunya Fever are available at the Microbiology Department Goa Medical College.

Integrated Vector Control

These measures against the mosquito vectors include a) Anti larval operations involving – chemical spray. All health Centres are provided with chemicals and pumps b) Fogging operation in disease problematic areas and in case of any threat of increase in cases/epidemic of the disease. Ultra Low Volume fogging introduced in high risk areas c) Bio – environmental measures comprise of fish introduction in wells/ponds etc. Hatcheries of fish are set up at 22 Health centers and d) physical measures of desilting, deweeding and channelizing..

BCC Activities:

Behaviour change communication strategies comprise of

- 1. IEC activities to create mass awareness
- 2. Advocacy/Inter sectoral co-ordination meetings
- 3. Involvement of Mass media Channels including print and electronic.
- 4. Folk media activities namely dramas and street plays
- 5. Display of mobile hoardings.
- 6. Cleanliness Drives through schools and village committees
- 7. Competitions/Campaigns in educational institutions and with non-governmental organizations.

Capacity Building

Regular training for Medical and paramedical including Laboratory technicians in and outside this state to have trained man power at all levels.

Legal Measures

Under the Provision of the Public Health Act, the migrant workers should have health cards which are issued after screening them for malaria before they are engaged at the construction sites. A fine of Rs. 1000 per labourer is imposed in absence of these cards. These cards are to be renewed every 3 months. The Builder/Contractor should take all anti-larval measures. Any default/contravention of the provisions of this Act, necessary steps are taken to disconnect water/electricity connection or even to the extent of revoking the license through concerned departments and local bodies.

STATUS OF VECTOR BORNE DISEASES IN GOA

MALARIA

Year	BSC/E	Pv	Pf	Total	Deaths
2000	281244	6664	2500	9164	11
2001	277311	9021	3310	12331	12
2002	273434	13470	3348	16818	15
2003	278647	9867	1503	11370	1
2004	239043	6452	1387	7839	7
2005	258842	3317	430	3747	1
2006	277989	3814	1196	5010	7
2007	355545	6708	3047	9755	11
2008	397349	7095	2727	9822	21
2009	417010	4000	1056	5056	10
2010(upto May)	150917	672	102	774	0

FILARIA

Year	BSC/E	MF carrier
2000	12676	3
2001	14210	2
2002	13691	11
2003	18293	10
2004	23406	11
2005	31233	7
2006	25058	5
2007	20063	8
2008	25724	2
2009	46605	5
2010(upto May)	5710	0

Lymphatic Filaria Cases : 182

DETAILS OF MASS DRUG ADMINISTRATION

Year	Population	Eligible Population	Populat-ion. covered	% of people received drugs	No. of tablets supplied	No of tablets distribut ed	Balance. of tablets
2007	1469665	1406328	1385531	98.52	4052200	3481202	570998
2008	1509624	1409047	1377811	97.78	3907250	3673035	234215
2009	1527350	1416889	1364712	96.32	3948615	3648159	389206

DENGUE

Year	Suspected cases	Confirmed cases	Deaths
2000	0	0	0
2001	0	0	0
2002	0	0	0
2003	12	0	2
2004	0	0	0
2005	13	1	0
2006	6	1	0
2007	52	36	1
2008	38	43	1
2009	1438	277	5
2010(upto May)	384	90	0

JAPANESE ENCEPHALITIS

Year	No of AES* cases	Confirmed cases(JE)	Death
2000	122	16	3
2001	30	6	0
2002	8	8	0
2003	0	0	0
2004	0	0	0
2005	20	4	0
2006	83	8	1
2007	61	9	0
2008	36	3	0
2009	65	1	3(AES)
2010(upto May)	7	1	0

\***AES:**Acute Encephalitis Syndrome

CHIKUNGUNYA

Year	Suspected fever cases of Chikungunya	Samples referred	Confirmed cases	Deaths
2006	287	91	22	0
2007	-	90	24	0
2008	52	52	21	0
2009	1839	1525	685	0
2010(Upto May)	394	394	191	0

Health cards issued and fine imposed

year	Health cards issued	Health cards renewed	Fine imposed (in Rs.)
2000	9363	0	1,98,000
2001	7605	0	1,92,000
2002	8986	0	3,08,000
2003	17666	6558	4,18,400
2004	11406	5623	3,30,900
2005	12492	5943	1,58,700
2006	19176	6296	3,33,000
2007	35550	10012	5,26,500
2008	43177	15464	765800
2009	47512	19043	654500
2010((Upto May)	16149	6730	239300