Independent Review of National Vector Borne Disease Control Programme

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EXECUTIVE SUMMARY

Background and objectives:

Malaria is one of the most serious public health problems in India. In order to address this problem Government of India launched the Enhanced Malaria Control Project (EMCP) from 1997 to 2002 with financial assistance from the World Bank. EMCP was implemented in 19 towns and selected districts of highly endemic 8 states in the country. The current review of the National Anti-Malaria Programme (NAMP) was undertaken with the objective of assessing the impact of the programme on the morbidity and mortality due to malaria, review the implementation and effectiveness of malaria control strategies at national, state, district and peripheral levels and suggest recommendations.

Methodology:

Seven states, 13 districts and 7 municipal towns were selected for the review with a multi stage sampling technique. The review was conducted at national, state, district including municipal towns, primary health centre (PHC) and community levels. An interview guide was used to collect information from the officers at various levels and village leaders, malaria link volunteers, patients and their relatives. In addition, physical verification of stores, microscopes, hatcheries, spraying centres, supplies, bed nets, fever treatment depots (FTDs), drug distribution centres (DDCs), households, laboratories, and malaria clinics was made. The review team visited state malaria offices, district malaria offices, training centres, government and private hospitals, PHCs, subcentres, pharmacies, and Anganwadis. Discussions were held with physicians, laboratory technicians and other practitioners and information systems were checked and cross checked at every stage during the visits. Group discussions were conducted with link volunteers, malaria patients (current and recently recovered), practitioners of other systems of medicine, informal leaders and members of Panchayat Raj Institutions (PRIs). In addition important findings of the previous studies conducted in three states (Andhra Pradesh, Maharashtra and Orissa) are also included in the report. Further the secondary data at the national level has been analysed to find out the morbidity trends over a period of 7 years (1996-02).

Findings:

Total number of malaria cases has decreased from 3.04 million in 1996 to 1.84 million in 2002. The reduction in the number of malaria cases was mainly in the EMCP states of Maharashtra (86%), Andhra Pradesh (70%), Rajasthan (77%) and Madhya Pradesh (78%). If we looked at the proportion of the total number of cases in the year 2002 a few states emerge as problem states in the country. The states of Orissa, Chhattisgarh, West Bengal and Jharkhand in the east and Karnataka in the south are those states. The state of Orissa alone contributed to over a quarter of the total malaria cases in India, and Orissa, Chhattisgarh, West Bengal and Jharkhand together contributed to more than 50% of the cases in India. In the south, the state of Karnataka contributed to over seven percent of total cases in India. The adjacent state of Goa is also a highly endemic state. Regarding mortality, the total number of deaths due to malaria in the country declined from 1010 in 1996 to 973 during 2002. Nearly 50% of these deaths in 2002 were in Orissa and 16% were from West Bengal.

Active and passive surveillance for malaria were much better in EMCP states compared to non-EMCP states and north eastern states. In states like Kerala and Haryana the annual blood examination rate (ABER) was less than the expected 10%. In the north eastern states active surveillance was not adequate. In a state like Kerala where utilization of health services is almost universal the ABER was less than 5%. The stipulation of radical treatment for malaria within 72 hours was found to be difficult except for patients reporting to hospitals. Radical treatment was given to confirmed cases of malaria within 5 days to two weeks. The delay in radical treatment was due to inadequate number of laboratory technicians, inadequate number of male multipurpose health workers (MPWs), long distance between hamlets and laboratory, less priority given to malaria in the health system and non-availability of blister packets and rapid diagnostic kits in most parts of the states under review. The availability of insecticides varied from 50-100 per cent of the requirement. In some places spraying operations were affected due to non-payment of wages to spray workers. In some states PRIs arranged for wages for spray workers. Mosquito nets were reported to be good for malaria control. However there was only limited supply of nets. One of the highlights of EMCP was the large scale use of larvivorous fish. In some states hatcheries were maintained by fisheries department demonstrating a good inter-sectoral collaboration. Out of the 7 states 5 did not report any problem of drug supply. However the two north eastern states reported delay in drug supply from the centre. EMCP states had adequate budgetary allocation for human resource development and training programmes were conducted for most of the malaria staff. The directorate of NAMP recently developed management information system (MIS) software. This was found to be a significant achievement for the MIS for malaria control activities in the country. In EMCP states, materials for information education and

communication (IEC) were professionally produced and utilized to educate the public on malaria control. Mitanins in Chhattisgarh, who are community volunteers from hamlets selected and trained for malaria work, are dedicated community workers for the control of malaria. Role of Non Government Organizations (NGOs) was found to be minimal and insignificant in malaria control. In addition to Fisheries department's involvement in fish hatcheries tribal department and PRIs also supported malaria control activities in many ways. Private sector was not involved significantly in malaria control programme except for a few places. There were indications of drug resistance in many places. At state and district levels there was a system to administer the programme. At the PHC level the implementation mechanism was found to be weak. Although the allocation of funds was reported to be adequate the flow of funds from the centre to the state as well as from the state to the districts was found to be erratic. EMCP states had sufficient number of vehicles for supervisory work. However other states did not have sufficient vehicles and or POL for supervisory work. EMCP states had better office facilities for the administration of the programme. Malaria control programme was found to be more effective in rural area compared to urban area. However EMCP towns had better performance compared to non-EMCP towns. In non-EMCP towns vector control was found to be part of regular health activities and not specifically targeted to malaria.

Recommendations:

Since mortality and morbidity due to malaria are concentrated in a few states in the east and one state in the south, maximum malaria control efforts may be made in these areas. As the proportion of Pf cases continues to be high, following steps are recommended to address this issue. Rapid diagnostic kits and blister packs may be made available to all the PHCs in the high endemic areas. Appropriate logistics like local courier service, public conveyance and local postman also may be put in place to reduce the time lag between the collection of blood sample, testing and return of the results. Medical officer of PHC may be given the authority to draw finance for this purpose. Focal spraying may be resorted to as soon as a PF case is identified to arrest the spread of infection. Government of India may review the existing drug policy in the context of drug resistance. Research on the particular vector and its bionomics and resistance to insecticides may be undertaken. In this context, research capacity of entomologists/biologists in the states may also be enhanced. Government may incorporate the research findings related to drug resistance and insecticide resistance to evolve appropriate drug and insecticide policy for malaria control. Surveillance system of the malaria control Programme may be strengthened. For this the following recommendations are put forward. In the context of integrating the malaria control Programme with other health programmes, passive surveillance needs to be strengthened at all levels of health system (PHC, CHC and district hospitals). To augment the shortage of male

health workers for malaria work, the state governments could consider increasing the number of DDCs and FTDs. In the absence of laboratory technician, government may supply rapid diagnostic kits to PHCs to maintain the tempo of surveillance. Sine the role of male health workers has been integrated with the general health system it is necessary to expand and strengthen the cadre of MLVs and other Volunteers for active surveillance.

It is recommended that the workforce involved in the malaria control programme may be augmented and strengthened by taking the following steps. State governments should make every effort to fill all the vacant posts of male health workers. In case they are unable to do this, it is recommended that at least they deploy the existing staff to the high malaria endemic areas in the state. Vacant position of laboratory technicians in PHCs may be filled and the technician be specially trained to diagnose malaria. In the north-eastern states where it is difficult for the health worker to reach all the households due to difficult terrain, and their scattered settlement pattern, large number of MLVs in the village and hamlets may be trained to identify the fever cases and take blood smear to improve malaria surveillance. In some states, anganwadi workers and Mitanins are trained to identify fever cases and to give presumptive treatment. This may be extended to other states as well and also may be intensified in co-ordination with the social welfare department.

Considering the number of training programmes conducted by the EMCP states, the state governments may undertake post training assessment of knowledge, attitude and skills. State and district malaria officers may be trained in management of malaria programme like planning, implementation, supervision, monitoring and evaluation. .

It is recommended that the Integrated Vector Control (IVC) may be expanded and strengthened by undertaking the following steps. Central government may ensure adequate and timely supply of insecticides to the states and the state may ensure that the district malaria offices have adequate space for storing insecticides and spraying equipments. Wages for the spraying workers may be paid without delay to undertake regular spraying, seasonal spraying and focal spraying. The central government may supply impregnated mosquito nets to BPL households free of cost or at subsidised price in high endemic areas. Others should be encouraged to acquire mosquito nets. Further, the existing mosquito nets in high endemic areas may be treated regularly. The state malaria control office may seek the help of the fisheries department to promote the larvivorous fish hatcheries in the states. State malaria control office may work closely with the public health engineering department to ensure that water stagnation is prevented, especially in urban areas.

It is recommended that IEC may be expanded and strengthened in the following areas of anti-malarial programme. IEC work related to malaria control programme may focus on spraying of insecticides. The community may be educated to accept spraying inside the house as well as the surroundings of the house. Health workers may educate the community to report fever cases to the sub-centre or PHC, thereby strengthening passive surveillance. IEC may be used to promote treated mosquito nets in the community. Each state may use the local media and folklore for conveying messages related to prevention and early treatment of malaria. Government may ensure that professionally designed IEC materials may reach the population using appropriate media. Government may undertake the evaluation of the impact of IEC materials and media in terms of positive behavioural change of the population towards malaria control programme.

It is recommended that the management information system may be streamlined and strengthened in the following manner. Since malaria is a notifiable disease the state government may insist on the private sector to report positive cases of malaria to the district health authorities. In those districts where there is a district malaria officer who looks after only the malaria work of the district, may be trained in MIS and he/she may be provided with computers to process data. There may be mechanisms within the programme to ensure greater quality of data, reporting system and feedback. MIS using GIS developed at the New Delhi office may be extended to all states, so that village level information is available on the website for decision making as well as for learning lessons from other states.

It is recommended that the role of PRIs at the grass root level may be strengthened by involving them in the following anti malaria activities. PRI may be involved in vector control programmes such as distribution of larvivorous fishes and spraying operations and treating bed nets. Staff of the PRI may be encouraged to identify the fever cases and direct them to sub centres, DDCs, FTDs and MLVs. PRIs may be given the responsibility to supervise the MLVs and their honorarium may be routed through them. PRIs may take an active role in distributing IEC materials widely in the community. PRI should play active role in all the activities during the antimalria month.

Central and State governments may expedite the financial disbursements directly to the state malaria control society, so that there is smooth flow of funds at the district level to implement the programme effectively.

At the PHC level the state governments may ensure adequate infrastructure such as space and equipments. In areas where there is no government building, government may take on rent adequate space for the PHC.

The government may motivate NGOs to get involved in areas like IEC, and working with volunteers and community.

Inter-sectoral co-ordination may be further strengthened. For this purpose, the office of the malaria control programme at the state and district may initiate dialogue with those government departments that can contribute to the control of malaria. These departments may include agriculture, fisheries, water supply, sanitation, and public health engineering. This may be achieved by giving representation to these departments in the state and district malaria control societies.

Public Private Partnership may be strengthened.

It is recommended that considering the special features of the north-eastern states, the Government of India may consider special anti malaria programme for this region. Such a programme may have the following features. A cadre of volunteers in line with the Mitanins of Chhattisgarh may be created at the village level and may be provided with adequate honorarium to travel in the difficult terrain. Considering the financial constraints of the north-eastern states, the central government may support the above programme. Because of the difficult terrain of these states, each district may be provided with atleast 3 four wheelers and sufficient number of two wheelers and adequate POL. Central government may ensure adequate and timely supply of materials such as drugs, insecticides, impregnated bed nets and equipments to these states, which have difficult terrain and poor transportation facilities. Village level volunteers may be trained to use rapid diagnostic kits and blister packs and these may be supplied adequately to them.