# Lecture Topic: Operational Research -1
# Systems Analysis of Health Programmes

## Case Study- 2

## Malaria Epidemic in Dhalai District of Tripura State

## Systems Analysis & Recommendations : as submitted on August 31st 2014.

**( Not to be quoted- it's a draft and not a final approved document)**

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### A. Background:

Dhalai district is a tribal district in the east of Tripura state. It has a population of about 4 lakhs. There has been a major outbreak of malaria in this district Dhalai since June of 2014, with reports of over 20,000 cases and a large number of deaths ( 30? 100?) in the last three months.. Although the situation has improved, there is every reason to fear a second peak in the coming two months- because of what is known as the propagated phase or the second "winter" peak phenomena Also, even now, the incidence of the disease is at a much higher level compared to the same month of the previous year. This Case Study does the systems analysis in three parts- the first deals directly with the health programme to control malaria and its implementation.
The second section deals with the health infrastructure and its adequacy and the third section deals with issues of cost , quality, management and governance issues.

### B. Observations:

1. The ICMR center in Dibrugarh reported that the main vector in this outbreak was *Anopheles baimaii.* Not only was this the most common mosquito collected, it was the only one found to have Pf parasites. This is a forest species and 75% of biting occurs between 9 pm and 3 am. Only 25% of mosquitoes rest on the walls before biting. ( exophilic) It also bites in evenings outdoors.(exophagic) It is least amenable to control by insecticide spraying indoors since it does not rest indoors much. It is a highly anthropophilic vector- with a high efficiency. Therefore Insecticide Treated Bed Nets (ITBN) are the most effective preventive approach. *A.minimus* and A.*phillipines* were minor vectors. *(to my knowledge this is the first time Tripura is reporting A. baimaii as the main vector- implications of this need to be studied. This vector is closely related to the*

*better-known A. dirus, and its predominance may be due to a a reclassification of the same.. The ICMR report is very well done and must be widely shared to understand vector dynamics; key officers have not seen it.).*

2. In PHC -Nakasai, three of 13 sub-center areas had completed ITBN introduction, and spraying was undertaken only in five sub center areas. In other PHCs the coverage was even lesser. One of the reasons for this poor coverage was that the Annual Parasitic Index (API) based on blood smears was low. The examination of the laboratory records showed that three positive cases in the last three months- one every month. However based on diagnosis using the Rapid Diagnostic Kit (RDK), this PHC out patient clinic itself had treated over 70 cases each month. If we add those testing positive in the sub-center areas, or referred directly from the sub center areas to the SDH, the case load is much higher. Despite that, PHC was classified as a non-affected, non-endemic area using API based on smears. There is really no good reason for not making ITBNs available in all villages in affected districts. No doubt some prioritization is necessary in the face of limited resources, but the problem is not one of financial resources - it is really a problem of management.

3. There is a role for continued Insecticide Residual Spraying (IRS)- though it cannot be the sole measure. The ICMR reports that about 25% reduction in mosquito load may be gained through this, and there are other vectors that are sensitive. But it also recommends Deltamethrin over DDT- whereas the main spray in use in these areas is DDT. We note that only five sub-center areas had received IRS. The coverage as for ITBN is also low, and seems to be based on the API readings.

4. Precise messages in the community and protective prophylaxis are also not undertaken. Neither the ASHAs nor the field workers were clear about these. There is no clear message that all fevers are to be tested for malaria. In practice, adjusting to the crisis in RDK availability, the field worker has to make a clinical judgment on whether a fever is likely to be malaria and then get these to go to the facility to get it tested. This is a clinical decision, which they are ill-equipped to take. Most ASHAs and even some sub-centers do not have RDK kits. ASHAs are not trained on RDKs. They are paid for Blood Smear Examination (BSEs) Rs 15 per malaria slide made and this has become a stand alone activity- where the emphasis is on ASHA payment. The linkage to malaria control appears to be lost. There is a reliance of health camps to do fever search and location. While this is important for *jhum* cultivation areas, it is a sub-critical strategy for other areas, where house-to-house survey should be the main strategy.

5. The stock position of drugs is precarious. The current system seems to be to wait for nil stock or close to nil and thereafter place an indent. At no facility visited were the officers aware of the minimum amount of stock they should hold. For example Manikbhander Sub-Center- a model sub-

center in many ways did not have RDK kits till 15th June. In June the SC received 60 in July 90. In August, they were left with ten and its utilization has stagnated. Since then they have started referring to the SDH, even for RDK testing. The SC had zero ACT stocks till June. They received one batch in June, and now have just one dose left for each weight group. Since all treatment is referred to SDH, they manage. There has been no Chloroquine supply for the last two years, no Primaquine (2.5 mg or 7.5 mg) in stock, no Paracetomol syrup for children, and there are 100 blood slides – but no lancets. ASHAs in the villages covered by this sub-center do not have any of these supplies. So though we have a female and a male MPW and eight ASHAs the anti-malaria services are minimal. The apparent justification – is that API is not high. However just last month 13 of the cases referred tested RDK positive. Stock positions in Nakasha PHC were better, with adequate ACT and RDKs- but again the system was of reaching nil stock before indenting. There was no Primaquine in the stock, but it was indented for. The staff had however kept aside some Primaquine supplies for meeting requirements in the interim. However the PHC which supplies each of the 13 sub-centers under it, had little idea of the stock position in sub-centers. Possibly the staff are alert and there is no stock out, but there is no system in place to assure this.

6. The premature change over to the next round of technologies without first ensuring the supply side logistics, adequate training in place, and the premature withdrawal of existing technologies has cost the system greatly. Thus while the state has problem in getting sufficient supplies of ACTL, the earlier ACT was withdrawn and chloroquine was completely withdrawn. Similarly LLINs procurement is a costly and complicated affair, but before these could be procured, the ITBNs have been withdrawn. Treatments of locally available nets have not even been considered. (ACT= artesunate combined therapy: artesunate-sulfadoxine-pyrimethamine; ACTL= artensunate combined therapy with artemether-lumefantrine (AL) – this is just on to the market. Its advantage is supposed to come from high reports of resistance to sulfadoxine- pyrimethamine in the North- East)

7. There is an apparent reduction of the role of the sub-center and the ASHA. They are encouraged to refer patients who test positive and never undertake treatment. While this has some meaning for pregnant women and children below 5, it is harmful, if this is made a universal principle. It also means we are wasting the HR at our disposal. Now even testing is being withdrawn and fevers are referred for testing at the SDH. In the town where the SDH is located, many patients with fever are being sent to the RKS laboratory within the SDH *where they are charged Rs 70 for an anti-malarial test- using RDKs which we are told are purchased locally.* These paying patients are all referred by doctors in private practice of the same government doctors working in the SDH. While the "resolving-less, referring-more" practices being encouraged for ASHAs, ANMs and MPWs, may have little to do with the latter problem of increasing private

practice channels- this nexus will soon develop and we should take preventive measures now, rather than wait till it becomes the culture.

8. Minimum two if not three MPWs- one male and one or two females – in each sub-center must be reached as an urgent priority. Currently we have either one male or one female worker- not both !! The training is weak , but weakest for the male health worker.

## C. Recommendations:

1. **Make insecticide treated bednets available through the PDS** (public distribution system)- such that ***every family in the district*** is issued the same. Do not wait for LLINs. Start with local nets with insecticide treatment available in the panchayat headquarters or sub-center. Then as LLINs come these can be gradually replaced. Anyway it is unlikely that LLINs can be procured in sufficient quantities to cover everyone. This must be accompanied by a much more powerful campaign using ASHAs and the radio- focusing on bed-nets. The anecdotes of LLINs being used as fishing nets, which anyway appear to be exaggerated, can be addressed also through radio advertisements, etc. Use of bednets is a preventive measure- there is no need to wait till the disease peaks. That is only for prioritization of where to distribute limited nets.

2. **Define High Risk areas based on RDK positive figures**: Improve Blood Smear Examination (BSE), but in parallel start casting APIs based on RDKs with every ASHA reporting at least 2 cases per month, and sub-center of about 3000 population in all reporting at least 30 cases based on RDKs in fever cases. Make sure RDK positive cases from any sources are added into numerators when calculating API.

3. **Extend insecticide residual spraying** into all villages reporting rising positive falciparum cases, and do not depend on API based on BSE alone. Reconsider choice of insecticide in consultation with NVBDCP based on ICMR report.

4. **Health camps in all Jhum cultivation areas** once a month would be advisable to check for fever cases and encourage preventive measures. In other areas focus on house to house visits.

5. **Minimum Stock Holding Guidelines:** Issue guideline that every ASHA should have at least 2 RDKs and subcenter should have 10 – in stock. That means that every ASHA should be issued 10 RDKs and then their stock falls to less than 5 they should ask for a refill of stock. By the time the refill comes, they still would have at least 2 with them. Similarly a subcenter should be issued 30 and should ask for a refill once the stock falls to 15. Such thresholds should be declared for all anti-malarial commodities.

6. **Test all fevers; treat all positive cases at once and locally**: Issue guidelines that all ASHAs and sub-center staff should test all fevers and treat. And referrals to the SDH should not be to the private practices of government doctors. *No malaria testing should be charged- if done by govt, whether referred by private or public.* Though the instruction that children under 5 testing positive for malaria must be hospitalized, is valid and useful instruction, this should neither be a reason for delaying start of treatment, nor should it be extended to entire population where there are far too many cases, and most will *not* get hospitalized just for fever . Also though there is an instruction to provide free transport for referral, the systems that can deliver on this promise do not exist. *Therefore the on-the-ground de facto withdrawal from testing and treating by sub-center MPWs and ASHAs must be reversed.* Treatment must begin as soon as an RDK or blood smear tests positive wherever they are. Also *reorient the ASHA incentive guidelines* so that there is no difference between doing RDK and doing BSE examination in terms of who is paid what incentive.

7. **Monitor stocks of all Anti- Malarial Commodities:** Our finding is that some anti-malarial commodities are obtained, but others get forgotten. It is important to ensure stocks management for 12 to 13 commodities. The anti-malarial commodities which will come under these rules are:
    a. RDKs
    b. ACTL
    c. ACT
    d. Chloroquine
    e. Primaquine 2.5
    f. Primaquine 7.5
    g. Paracetomlol adult tablets
    h. Paracetomol kid packs/syrups
    i. Blood Slides
    j. Lancets.
    k. Insecticide- DDT? Deltamethrin?
    l. Insecticide bed nets
    m. DEET- personal prophylaxis cream ( not currently on list, but flows out of ICMR recommendations)

8. **Do not withdraw established drugs and diagnostics prematurely:** Clarity may be taken from NVBDCP on super-ceded technologies like chloroquine, ACTs and ordinary manually insecticide treated nets. Is there an order to withdraw them? When regular supply for newer technologies is not established, the premature withdrawal of older drugs which are also good must be avoided.

9. Based on clarifications and the policy- **the ASHAs and MPWs- M & F- must be immediately trained on the use of all the above 13 commodities.** Even if they are not administering it, they need to have an informed awareness so that they can guide patients.

10. **Improve Health Communication:** Key IEC messages must include personal prophylaxis in the evenings, the use of bednets at night, and the need to test every fever on the first day- and if needed again on the seventh day if fever persists.

## Part II. The Health infrastructure.

A. **Background:**
It is widely believed that the major problems of tribal backward districts like Dhalai are of infrastructure and human resources and also of equipment and drugs. Implicitly this calls for further inputs and expansion of facilities. This section assesses the gaps in this based on the study of Kamalpur sub-division of Dhalai district. It explores the reasons behind the gaps and what can be done to close these gaps.

B. **Observations:**

1. The sub-division of Kamalpur has roughly 139,000 population. This population is catered to by a 100 bed sub-division hospital, three PHCs- two of which have 10 beds and one has four, and 44 sub-centers. In terms of population norms these are adequate for sub-centers ( 1 per 3232 population; or 1 per 2957 population if we count each PHC and higher facility as also providing sub-center services for the local area). For PHC it is one per 34,000 population- but this district merits consideration as a tribal and hilly area, in which case it is eligible for three more PHCs. The number of beds for secondary care in the SDH are adequate by norms.
2. The SDH has four specialists, three medical officers and 26 nurses. There are approximately 75 outpatients per day, and 63% of beds are occupied. There is an operation theatre and a blood bank, the latter being active. The Operation Theatre is used only for C-Sections. All these are well utilizated. There is an active blood bank service which is doing well.
3. The PHC staff position seems good. Nakasai has two medical officers, two AYUSH doctors and seven nurses for 10 beds. It has its 2 pharmacists, and 2 lab technician. Its OPD is about 30 per day and 6 out of 10 beds were occupied. It does about 10 deliveries per month. However given the problems of geographic terrain and poor connectivity, what can be seen is that the PHC is more or less catering to the neighboring villages- and not the entire 30,000 population. This problem can be reduced by opening three more PHCs in the sub-division, thus reaching the ideal of one PHC per 20,000 population and/or it could be done by upgrading all sub-centers to provide a larger range of services. The latter option is likely to be more feasible and affordable.
4. To increase the case load in PHCs and taking note of the problem of local travel, we could consider offering transport services for those patients identified by ASHA or sub-center workers in tribal villages who need to see a doctor and transporting the tribal patient to the hospital.
5. Though sub-centers are adequate in numbers, their staff position is inadequate. Each sub-center should have two female MPWs and one male MPW to provide the entire range of services as notified

in the NHM framework. An additional mid level care provider would also be desirable. Thus of 44 sub-centers in this sub-divison 24 have only one male worker and another 20 have only a female worker. Five sub-centers that are designated as delivery points have one male and two female workers. Sub-centers without ANM are unable to deliver any sort of care for pregnant women either antepartum or postpartum.

6. The state produces 200 doctors per year, but only 60 female MPWs (or ANMs) per year and 120 male MPWs per year. Since there are only 1000 sub-centers and 125 PHCs and about 35 CHCs or SDH, a year's graduates should be adequate to fill all medical doctor vacancies, whereas it would take much longer to fill nurses and ANM vacancies. Of course this is being expanded – but for nursing this rate may be too slow.
7. Another area of action is to target local area selection for nurse and doctor training. Most of those happy with their place of posting are persons from that same locality. If educated ASHAs are given the option, or panchayats of these under-staffed sub-center areas asked to nominate two candidates for ANM education, these gaps can be filled within two to three years.
8. The lack of patient transport and emergency response services is a major problem. Whereas most states have introduced a 108 service, a 102 service and a local tie up model to cater to different segments of patient transport requirement, Tripura has not started on any. Given its terrain and problems it needs to evolve its own model.

**C. Recommendations :**

1. **Strengthen every sub-center to have 2 MPW- F and one MPW- M with adequate skills to provide all the primary care in the NHM list.** The male MPW is not a substitute to the Female MPW. We need both and we preferably need two female MPWs in place in every sub-center.

2. **Increase the number of seats/schools for nursing and ANM education** to meet the requirements and in proportion to the gaps.

3. **Partnerships for mentoring and building excellence in technical education:** for each of these courses- for MPWs, for ASHAs, for Medical Education etc. For MPW schools- both M & F the main challenge is content and quality of education. Need to do much more in this – in collaboration with centers of excellence in these areas.

4. L**ocality based selection from under-serviced areas for ANM, MPW, nurse and even doctor training:**- candidates being drawn from local block or district, and in more difficult areas from same village. The panchayat may choose from amongst the ASHAs, but if there is no willing or qualified ASHA it could be open to any high school passed girl.

5. **Put in place a patient transport and emergency response system.** This should have a central call center, few BLS type ambulances, linkage to all facility based ambulances and mandatory local tie-up between a local transport provider and PHC which for a pre-fixed rate, which is reimbursed from RKS, transport patients to the hospital and back home. Though generally free, some categories could be charged.

6. The AYUSH facilities need better and **wider range of AYUSH drugs.**

7. **Number of PHCs must be based on the one per 20,000 norm** (CHCs, SDH and DH should be counted as providing PHC services also for the purposes of this calculation). Thus by this understanding Kamalpur sub-division of Dhalai district needs three more PHCs.

## Part III. The Costs and Quality of Care:

### A. Background:

The commitment under universal health coverage, is that health care should be more comprehensive, more affordable and of effective quality. Free care through the public health system is one way of financial protection. Insurance schemes like RSBY are another. However there have been disturbing reports in the Common Review Mission reports and other NE- RRC reports of high and rising out of pocket expenditure in Tripura. There are also concerns about quality in terms of effectiveness in clinical skills- and in terms of patient safety, comfort and satisfaction:

### B. Observations:

1. Patients are facing a huge out of pocket expenditure in the public health facility. The higher the level of facility, the greater the expenditure. Most of the expenditure is due to costly non-generic outside prescriptions for drugs and for diagnostics - to pathology laboratories and X Rays. Most of what is prescribed on outside prescription basis, as seen in the facilities visited, is unnecessary or irrational. Thus the public health facility is failing to play a protective role.

2. Very few patients have the RSBY card- though all were poor and should have had it. One of them had the card, but had left it at home and no one had reminded her of it. Those who have and produced the card are billed for bed charges at Rs 500 per day and are also asked to procure drugs based on "outside prescriptions". Though the patients do not have to pay out of pocket, being charged on the card for a considerable sum, this generates a lot of business for the local pharmacies, but reduces the available risk cover unnecessarily. The patient with RSBY card coming to the government hospital has no real additional advantage. The facility looks at it as an opportunity to raise its own funds.

3. All government doctors seem to be doing private practice, despite collecting a Non Practising Allowance (NPA). The NPA amount and even the salary is small- but as we know from experiences of other states and nations, this per se has little to do with the prevalence of private practice. Clearly, especially in unnecessary cross referrals from public to private, and in kick-backs from pharmacies and diagnostics – there are conflicts of interest that drive this practice forward. This ill is growing- but this need not be seen as an inevitable problem. There are many positive and negative incentives that can greatly reduce, even if not eliminate this problem. No effort has been made in this direction.

4. Drug procurement and logistics remain a problem. Procurement is fragmented across four agencies, on an ad hoc basis and neither timely nor quality assured. This is a disaster waiting to happen. Fortunately the state has resolved to set up a TNMSC like corporation and have a set of processes that ensure timeliness, transparency, quality assurance, low costs and no stock outs. Unfortunately there is no timeline provided for achieving this. Essential Drugs Lists, and standard treatment guidelines are not in place and stock outs at the periphery are the rule, not the exception even for anti-malarials in high endemic areas.

5. The Rogi Kalyan Samiti receives funds from many sources. For example the SDH in Kamalpur raises Rs. 5 lakhs in a year from user fees (mainly from diagnostics especially ultrasound), and another Rs. 2.5 lakhs from RSBY. From NRHM it gets abut 3 lakhs - about 0.5 lakhs from JSSK, Rs 50,000 as untied funds, 1 lakh as maintenance funds and 1 lakh as RKS funds. Paying wards are also a feature that are coming up. Clearly there is a lot of pride and satisfaction in being able to raise this money and it provides a sense of satisfaction and value recognition. Clearly in the prevailing culture, there is a resistance to everything being free. – The revenue raising aspect was appreciated and approved by the officers and elected panchayat members in the district review meeting. But such fees could have adverse consequences for social protection and the culture of care and lead to exclusions of marginalized. There is a need to preserve the positive aspect without leading to the negative aspects. There is also a need to guide utilization of funds for improving quality of care- but there are no measures of quality and no quality improvement programmes in place.

6. One area of concern is the large number of neonatal and infant deaths even in the hospital. ( 8 deaths in one month in the SDH !!) This may be happening because sick babies are getting referred more. However there is no sick new born unit or newborn stabilization unit in place. There is no verbal autopsy of the high public health priority deaths- and nor are there any systems of clinical audit or review. Clearly no one is looking at clinical quality of care.

**Recommendations:**

1. Arrange a **two-day orientation of all medical officers (in batches) on rational use of drugs.** Precede this by building up the training material, notifying the essential drug list, the generic drugs policy and the standard treatment guidelines. Disburse these materials in the meetings. Repeat such meetings every two years. Special faculty, drawn from NGOs and senior medical professionals, who have an activist reputation for promoting rational drug prescription would be required for conducting this training and material development.

2. **Clinical care review:** Arrange for a team of resource persons from the medical college to visit each district and SDH and review clinical care in the hospital. All deaths and patients on treatment have to be investigated as done in ward rounds in medical college, and not merely as an administrative exercise. This would also yield organizational and systemic gaps as well, which could be discussed as well. (This has been done in Tamilnadu with some success.)

3. Fix a **time line for implementing the TNMSC type drug procurement and logistics system,** and ensure that the process standards for such a system as defined by NHSRC are met. It is not creating a corporation, but the achievement of these process-standards – with regard to drug logistics, quality assurance, rational prescription etc – that is critical. This can begin even before the corporation is established.

4. **Building Public and Pro-Poor Consciousness in Health Workers:** Introduce a section on Medicine as a Social Science, or Ethics in Medical practice- Or Community orientation of health Care Providers in all levels of provider training- for doctors, for nurses, for MPWs etc- so that they are oriented in a spirit of social services. (for example the male MPW course has no space for gender issues and issues of marginalization and poverty in their syllabus. The students are from modest and appropriate backgrounds. However the culture of the class-room, dressed in a school uniform with a tie and looking like executive officers, will they imbibe the right culture and remain community servants? ) Books like "Where there is no Doctor" should be used to inspire future health workers. There should be interaction with inspiring leaders of community health work in India, by arranging for guest lectures.

5. **Tackle the Private Practice Conflict of interests**: Come up with innovative ways to tackle the menace of private practice . One way that would work is to give a substantial difficulty allowance for three grades of difficult areas, plus a performance bonus for achieving a certain minimum case-load. But strict "no practice" should be enforced by panchayats. The basic salary is through treasury, but allowances are through RKS or panchayats. In urban areas – especially in Agartala, there should be no special allowances and private practice is allowed. Even in Agartala, one should reconsider private practice in medical college professionals- where there is teaching and research allowance. Let a dialogue begin, led by persons who are known to be very public spirited and above personal reproach.

6. **Integrate RSBY better.** The smart card could make patients eligible for a free health check up at the local PHC where they must also register. It could provide some transport payment when they are going to the hospital for admission or back. No unnecessary treatment is to be debited- and if we are debiting for their beds- they should be placed in the RKS/RSBY paying ward- and given the option of whether they want to go

there. There are other measures possible also, to make RSBY more useful to patient and to provider- but the current mechanisms only favours the private medical shops. Patients should be given a bill showing the value of free care they received. Ideally this should be done for every patient.

7. **Quality Scoring of Facilities:** The RKS should be trained to score the facility for quality ( or this could be done by an external team) and its should use its funds to achieve higher quality scores. Facilities, which achieve a significant increase in quality and in volume of care, could qualify for a bonus – which is given to the facility and part of it goes as monetary incentive to the team. Even for routine untied funds- all facilities need not be given the same amount. Half the amount if given to all facilities as per norms and the other half is pooled and given to those facilities, which are seeing more cases and providing more services. This is yet another way of monetizing value and ensuring funding corresponds to requirements. (please note: that in the current year the united funds amounts have been doubled- which means no facility is eligible for less than last year).

8. **Expand the Services available at periphery to fully utilize human resources and address health needs**. The services available in each facility – at each level- ASHA, sub-center, PHC, SDH and DH should correspond to needs and the basic qualifications and skill set of the health worker deployed plus the training can be provided additionally. Thus in a PHC all the services that a MBBS doctor can potentially provide and which are needed as determined by epidemiology should be available. Thus an AYUSH doctor or nurse could be provided with a bridge course to act as a mid level care provider. A baseline survey should be done to assess these needs and the current costs of care- and we need to plan to meet these needs and reduce the costs of care.

**Management and Governance Issues:**

1. **Fast- Forward Creation of SIHFW** – which includes health systems resource unit. The Directorates and the NRHM PMU can undertake some of the tasks listed above with existing capacity. But many of these tasks will need additional technical capacity- and this is what the State Health Systems Resource Unit (SHSRU) as a part of State Institute of Health and Family Welfare (SIHFW) should undertake. A Governing Body and Executive Committee for SIHFW with non- official expert members would be helpful to steer this programme. ( Chair : Secretary, health, Member Secretary – Director, SIHFW ) A programme advisory committee for the SHSRU component with a non-official member leading it could guide the SHSRU. (Chair – MD, NRHM, secretary, ). We need not await the completion of the SIHFW building to create the governing structures and recruit its staff, nor is it necessary to await the creation of the SIHFW to begin work on a number of the suggestions listed in this report.

2. **Separate the Specialists in Medical College Cadre from the rest of the Public Health Cadre**. The latter may include specialists and medical officers in district hospitals and CHCs and PHCs. Not advisable to split the latter into a clinical and a public health cadre- as these would become too small. For public health cadre a minimum capacity building, mainly in distance education mode should be organized. They would also need clinical skills updating.

3. **Decentralize More Powers to District Health Societies:** Expedite decision-making in many key areas by decentralization of certain powers to district health societies. There is no reason that contractual staff being appointed for supportive functions should have to be cleared at highest levels. A lot of time is lost in so many files having to go all the way to the top. In Dhalai for example the whole HMIS data entry is compromised by lack of timely appointment of data entry operators.

**Acknowledgements and Cautions:**

1. I thank all those who accompanied me and interacted with me during the interviews and field visits. This is a rapid appraisal, and though I have taken care to compare with other monitoring reports and information, the sample is too small to be sure of what I am saying. This report must therefore be looked at as indicative and tentative, rather than as conclusive.
2. I also caution that this is a snap-shot as seen at a point of time. We know there have been considerable improvements in the last ten years, especially in terms of human resources and infrastructure. It is therefore not an evaluation of the programme. It only discusses some of the challenges that the public health systems are facing