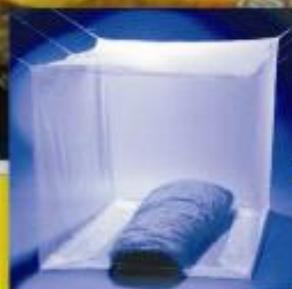


**GUIDELINE
FOR
SUPPLY, DISTRIBUTION AND COMMUNICATION
ON
LONG LASTING INSECTICIDAL NETS**



**DEVELOPED BY
NVBDCP AND TMST**



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Guideline on Distribution and Effective Use of Long Lasting Insecticidal Nets (LLIN), Orissa, 2009.

Appropriate vector control measures are essential to control malaria. Indoor residual spray with suitable insecticide and use of insecticide treated nets (ITMN)/ long lasting insecticidal nets (LLIN) are the major vector control strategies.

The guideline describes the implementation on distribution and effective use of LLIN, the new personal protection measure now available in the malaria control programme.

Objectives:

- To ensure equitable distribution and use of LLINs in all households in selected contiguous high burden area.
- To protect people from malaria infection by preventing the man mosquito contact during the active biting time in the night.
- To ensure supply and proper distribution of LLIN.
- To increase the knowledge of community and change in behaviour on use and advantage of LLIN in protecting them from malaria.
- To bring special focus to protect pregnant mothers and children under five who are most vulnerable to malaria infection
- To ensure effective monitoring mechanism for LLIN programme.

Advantages of LLIN over ordinary plain nets and ITN:

Ordinary plain net: Plain net not treated with insecticide provide limited protection. It provides limited physical barrier between mosquito and the man. Mosquitoes can still bite through the net or get inside the net if it is torn or there are holes or not properly used.

ITN and LLIN:

| ITN | LLIN |
|--|---|
| <ul style="list-style-type: none">• Ordinary mosquito nets treated with insecticide provide much more effective protection than the ordinary plain nets by repelling and killing the mosquitoes.• But these nets need to be re-impregnated after six months (twice a year). | <ul style="list-style-type: none">• These nets have insecticide incorporated in their fibre so that the insecticide is not removed by as many as 20 washes. The efficacy of the insecticide is retained up to 3-5 years.• These nets are generally more effective than conventional ITNs.• It improves the efficacy of the malaria programme with greater control and sustained behaviour.• Furthermore LLIN is now available at a price of Rs 200-300/- and hence less costly than the nets needing repeated impregnation with insecticide. |

The principle of coverage:

- ITMN/ LLIN are now the main methods for control of malaria transmission and a strategy adopted worldwide in malaria endemic countries/state.
- The population targeted to be protected by ITN/LLIN must have as close as 100% coverage ensuring everybody sleeping under net.

Distribution strategies:

Criteria for selection of villages to be covered under LLIN:

Villages with high risk criteria (API>2) are considered to be protected by IRS or ITN/LLIN.

Criteria for selecting the high risk villages for LLIN:

Depending upon the quantity of LLIN available, district may consider the high risk villages under 3 priorities (**API >5, API 3 - <5, API <3**).

To start with district should select villages from the first priority area and if more LLINs are viable then consider for 2nd and 3rd priority areas.

While selecting the villages from any priority area following points must be taken into account.

- I. Villages in difficult terrain where IRS is difficult
- II. Villages not covered under IRS or with poor acceptance to IRS (Percentage of coverage with IRS is less than 50% in last 3years).
- III. Villages where ITN coverage is less than 60% during last two years (studies reveal that ITN have a community impact when population coverage is 60% or higher).

However villages where surveillance is poor due to shortage/absence of health staff but perceived as a malaria endemic area by local health staff (health worker, health supervisor or medical officer) may be considered for LLIN distribution.

1. Distribution of LLIN in a village:

LLIN distribution should be done prior to the rainy season i.e. before the high transmission of malaria begins. However due to constraints in supply and logistics, LLIN may be distributed across the year. If the supply is available during the transmission season, then district may take all possible measures to make it available to the beneficiary at the earliest where people will get more benefit.

Priority for high risk group:

1) Pregnant women and young children (under fives):

Adequate awareness campaign should be done among the targeted community so that each family is fully conscious to protect the pregnant mother and the children under five as they are most vulnerable and affected by the dangerous variety of malaria i.e. falciparum.

2) Children in Tribal school hostels

The children of tribal school hostels should be provided with LLIN and they may be allowed to take the nets to their villages during vacations. They should also be sensitised on prevention of malaria through class room teachings that can spread through them to their family members and community. Children can work as 'change agents' in their respective communities in influencing the change in behaviour of the family and community members. This can be integrated in School health programme under NRHM.

Quantity required per village: If data regarding number of person in a household is not available, it can be assumed that an average household has 5 members (2 adults and 3 children). It is then possible for one LLIN of *family size* to cover an average of 2.5 persons (2 adults or 3 children or 1 adult plus 1-2 children). Thus, for a given village the number of LLINs required is usually equal to total population divided by 2.5. *Normally the quantity of LLIN required for the family should be considered on the basis of no. of persons in the family staying through out the year (some members may be staying away from the family for livelihood purpose).*

Example: if a village is having a population of 1200, then total LLIN (family size) required is $1200/2.5=480$.

This will normally ensure a sufficient quantity of LLIN for the following schedule:

1-2 persons: 1 LLIN , 3-5 persons: 2 LLINs, 6-7 persons: 3 LLINs, 8-10 persons: 4 LLINs

Sometimes villagers may complain that the number of nets assessed or supplied by the above schedule is not sufficient because of household members sleep apart.

Example: In one area members of GKS opined that in their houses girl of >13year old sleeps separately and also the old man and woman sleep separately. There may be many such other instances depending upon the culture and traditions. In such cases villagers should be explained that the family may buy an additional LLIN or a plain net which can be medicated.

In case a family is very poor: If the family is too poor to buy additional LLIN/net but needs, then GKS may provide the same from the 'buffer stock' or supply the same by utilising the contributory fund. GKS should decide whether to give the LLIN/Nets with subsidised rate or free considering the economic status of the family.

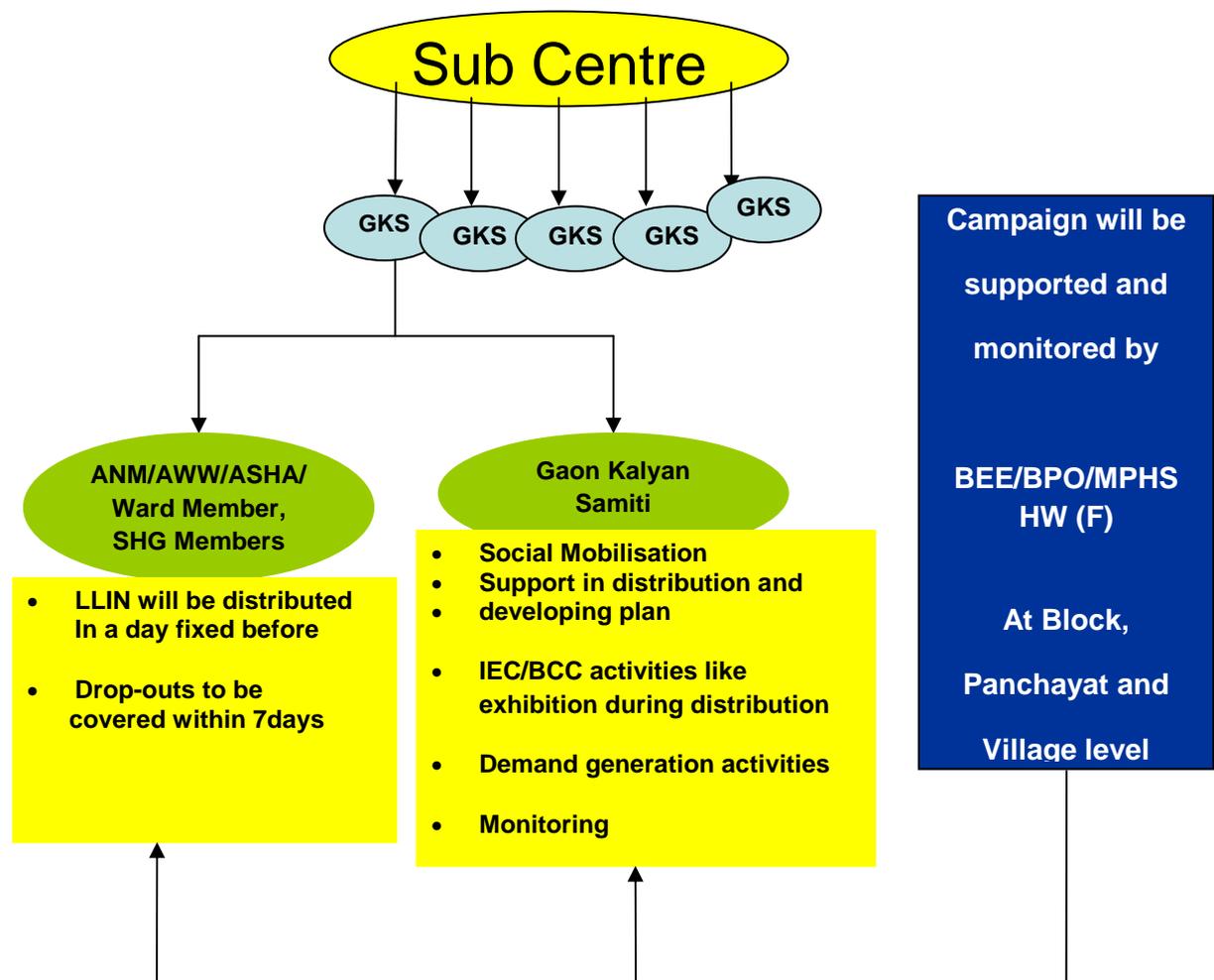
Buffer stock: Besides the above arrangement, a buffer stock of 3% of the entire quantity required for the village may be kept reserved to meet any kind of unforeseen additional requirement. This buffer stock may be kept at the block level and given to the concerned GKS after they indent with proper justification.

Distribution mechanism at the village level:

Distribution will be done through the GKS.

Ideally for a targeted village, the distribution of LLIN should be done in one single day operation but in case it is required then the GKS may decide to extend it by a day or two.

- The date of distribution of LLIN should be intimated to the villagers at least 7 days prior to distribution through GKS members and other volunteers. This should be linked with the IEC/BCC campaign activities.
- Required quantity of LLINs needs to be handed over to the GKS at least one day prior to the distribution (see the responsibility matrix). While distribution GKS should involve PRIs, SHGs, CBOs and NGO to facilitate.
- The LLIN packs should be opened before a small committee not less than 3 members of GKS. Wherever possible Female Health Worker should be included as a member.
 - This committee will certify the number of LLINs received and the same to be intimated to the Health Supervisor/ MTS for onwards transmission to the Block Medical officer.
- A respected person of the village / area may be invited to inaugurate the distribution of LLIN and there should be adequate BCC activities during distribution disseminating message on the use of LLIN to the community.
- A register should be maintained in the prescribed format at GKS level to record the details of LLIN distribution.
- Drop out households need to be identified after the LLIN distribution is over within two days and LLIN should be supplied maximum within 7 days.
- All GKSs need to be oriented on these aspects by the District/ Block team prior to the distribution.



2. Voluntary contribution by households:

LLIN distribution should be free for public health purposes. Practices favour the concept of some voluntary contribution as a symbol of ownership and building up a self-reliant mechanism at the grass root level. This will also strengthen the GKS with additional fund for the village development on malaria and vector control activities.

- District need to decide whether to collect a minimal amount of voluntary contribution from the beneficiaries as a symbol of ownership. GKS while distributing LLIN may decide to collect Rs 10-15/-from BPL and Rs 20-30/- from APL families based on the Socio economic status of the village/hamlet.
- The contributory fund will be deposited in GKS account and will be utilised for malaria control measures in the village. In the cash book register of GKS this will be maintained in details.
- It is important that this message should be properly transmitted to the villagers and other stake holders to avoid any confusion or misinformation.
- GKS may decide to provide free LLIN to the household with low socio economic status.
- **'Swastha Kantha'** will be updated with the status of distribution to help the community monitoring process.
- Voluntary contribution fund should be collected with proper money receipt. Uniform money receipt format /printed money receipt books in Oriya may be supplied by the district.

3. Use of the contributory fund by GKS:

- a. Funds generated by voluntary contribution will be deposited in GKS account and maintained in a register.
- b. This fund can be used for following purposes:
 - ICE/BCC activities, village meetings, SHG meetings, awareness by school children for village cleanness, observing weekly dry day for elimination of breeding sources for preventing breeding of Anopheles and Aedes mosquitoes.
 - Other activities that would help in prevention of malaria and other vector borne diseases.
 - Review and planning meeting by GKS for vector borne disease control.

4. Maintenance of Record & Registers

- VC-3 form will be used for primary record keeping of LLIN delivery and progress updates.
- VC- 4 form will be used for LLIN output report and progress update
- In the distribution register following information will be recorded.

| Sl. No. | House No. | Name of Head of the House hold (HH) | Name of Beneficiary | LLIN No.* | Code | Date of distribution | Sign/Lt. thumb impression of the HH member |
|---------|-----------|-------------------------------------|---------------------|-----------|------|----------------------|--|
| | | | | | | | |
| | | | | | | | |

*** Code number for each LLIN:** There should be a code number for each LLIN which will help in monitoring later. The code number should be written on the left hand corner of the LLIN by a permanent marker pen. The code number should be matched with ASHA code number mentioned in the M1 form.

5. Community involvement and Behaviour Change Communication:

Involving community with proper communication will achieve a great deal in benefiting the community by LLIN.

Who can be involved for facilitating the process? – they may be the local community representatives, Self Help Groups, CBO/ NGOs, PRI members who should be sensitised and encouraged to promote transparency of communication and optimal use by the community.

Health Workers and community volunteers can disseminate the correct messages by inter personal communication, small group discussions. Messages can be transmitted during Village Health and Nutrition Day (VHND), Pustikar Divas and at sector level meeting where ASHA attends.

Following IEC/BCC activities to be undertaken at the Sub center/Village level

- Household contact by ASHAs for delivering messages on the use & benefit of LLIN one week prior to distribution
- Display of posters on use and availability of LLIN at the Sub Centers and Anganwadi Center
- Wall writings on benefit, use and storage as well as the distribution date on the Swasthya Kantha under GKS 7days before the distribution
- Announcement through VHND/Pustikar Divas to generate local needs.
- Announcement and social mobilization campaigns in the religious places of the catchment areas such as
 - o Sensitization sessions for IHP/ISP will be conducted at block level in tribal blocks.
 - o Sensitization of Kalyani Club members

Existing IEC materials like leaflets, posters, video CDs can be used for the purpose.

Sensitisation/training should be organised for the health staff, GKS and other community level stakeholders prior to LLIN distribution. In tribal blocks Informal health service providers should be sensitised.

Sensitisation and Training should be done on how to convince regarding the benefit of using LLIN and how to use the net with proper demonstration and use of IEC materials. They should also be communicated on their roles and responsibilities on counselling, LLIN distribution and monitoring.

Key messages on medicated bednet (LLIN/ITN):

Use of medicated bed net is safe:

- Medicated bednets are safe for all including young babies and pregnant women.
- Direct skin contact with the insecticide on a wet net may cause a tingling sensation-**but this is not harmful.**
- In case of ITN there may be smell of insecticide after the treatment, but the smell is not harmful and subsides after a few days. **In case of LLIN there is no such smell.**

Advantages:

- Mosquitoes and other insects are killed with the effect of insecticide, hence vector borne diseases including malaria are prevented.
- As it prevents the entry of insects including mosquitoes, a person gets better sleep inside a medicated mosquito net.

The most vulnerable should be protected first:

- Pregnant women and young children are most vulnerable for malaria infection and malaria is very dangerous for them.
- However as much as possible all family members should be protected by medicated net as everybody can be infected by malaria.

Use of medicated net should be regular:

All members of the family should sleep under the medicated net daily round the year even if they do not perceive the existence of mosquitoes in their house or surroundings.

Use of medicated net while in forest:

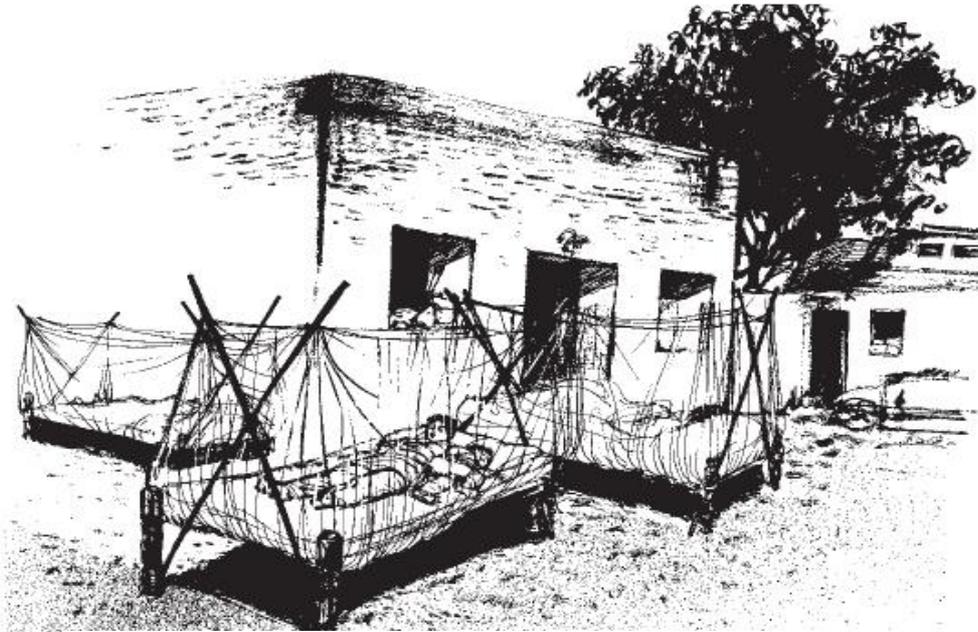
In forest areas if family members need to go inside forest and sleep there, it is important to carry the medicated nets and sleep under it- otherwise there is all possible chance of a mosquito bite and getting the infection.

Proper use of medicated net:

The medicated net works better if hung & tuck properly in such a way that there are no gaps, where insects including mosquitoes can come in.

If one sleeps in open i.e outside the room one should also use the net hanging with special arrangement (*see the picture how they use in a tribal area*).

Demonstration of correct hanging of nets



Placement of nets in four sticks while sleeping outside

Reproduced from J.Rozendaal. Vector Control. Geneva, WHO, 1996

6. Monitoring and supervision mechanism for distribution and effective use of LLIN:

- Village level monitoring will be done through GKS members.
- ASHA/FTD will be entrusted with the overall responsibility of monitoring & supervision of use of LLIN by the beneficiaries after distribution. Individual members of the GKS will monitor the use of LLIN through neighbourhood households.
- One designated Health staff should be present during the distribution, besides members from PRI or any CBO (if present) should be present.
- District, block, subcenter level monitoring teams may be formed for maintaining transparency.
 - The District level monitoring team should be formed under the chairmanship of CDMO and DMO I/c, DPM, VBD Consultant (in World Bank supported districts), MEIO/Dy MEIO, ASHA coordinator may be the members.
 - Block level monitoring team will comprise of MO I/c, Sector MO, BEE, BPO, MTS, Ayush Doctor.
 - Subcenter level monitoring team will comprise of Health Supervisor, Health Worker (male & female).

Stake holders' responsibilities and time frame of activities:

| Stakeholder | Responsibility | Time frame |
|--|---|--|
| SPO & Procurement and Supply Chain Management Consultant of NVBDCP | Supply chain management of stocks and monitoring of stocks and plan at each level | Weekly basis |
| ADMO(PH)/DMO | Receive the stocks at district and verify the stocks as per the plan and distribute the stock accordingly in co-ordination with VBD Consultant | within 2-3 working days |
| DMO/VBD Consultant | Ensuring delivery of stocks at Block/Sector/SC level | in 2-3 working days |
| Block MO I/C | Receive the stock at block level and verify the stock as per the plan and distribute the stock accordingly to the Sub Centre in co-ordination with Sector MO, MTS and BPO | within 2-3 working days |
| MTS/BPO | Deliver the stocks at Sub Centre or takes responsibility to deliver the stocks to GKS a day prior to the fixation for distribution. | in 2-3 working days |
| HW(F) | Ensuring the stock entry in the stock register | After receiving the stock |
| DHIO and BPO | Monthly stock updates will be collected and compiled by BPO at the block level and provide information to DHIO. | Within 2-3 days of succeeding month |
| VBD Consultant and DHIO | Preparation of the monthly report and submit it to ADMO(PH)/DMO | Within a week of succeeding month |
| ADMO(PH)/DMO | Submission of the report to the State Programme Officer, NVBDCP and M&E Section of NRHM | 2 nd week of succeeding month |

8. Preparatory activities at different level:

To have an effective community participation and better impact for LLIN distribution and use in a targeted population the whole activity should be done in a campaign mode starting from district to village level.

To conduct such a campaign effectively, the preparatory activities should be well designed at all level.

- 1. District:** A District level advisory / coordination committee may be formed under the chairmanship of District Collector. Chief District Medical officer may be the convener of the committee. Senior officials from Health and other related departments, representatives of civil society organisation, elected representatives may be the members of this committee. At least there should be seven members in the committee. The district may form any other representative body for smooth implementation of the LLIN distribution and the campaign along with it.

Responsibility and functioning of the committee:

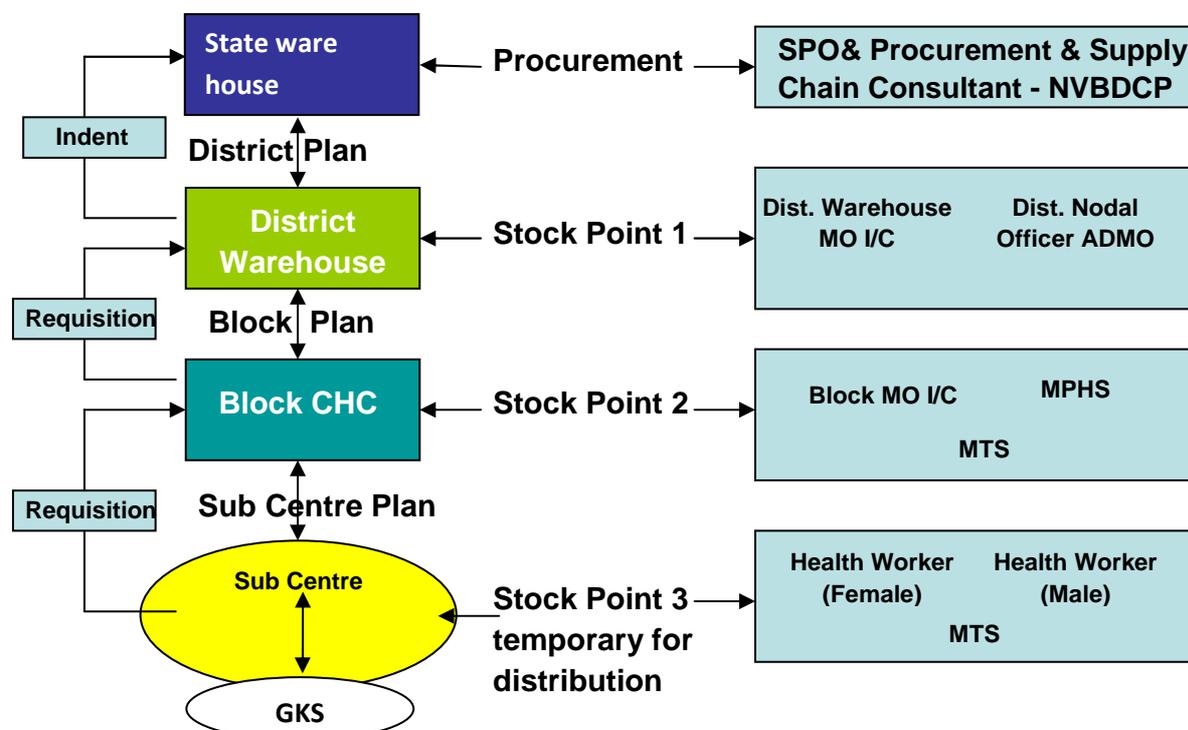
- i. The committee may approve the district LLIN distribution plan.
 - ii. Review of the distribution progress and the use of LLINs on monthly basis.
 - iii. Resolve any local conflict that may occur during distribution.
- 2. Block:** Block level advisory/coordination committee may be formed under the chairmanship of Panchayat Samiti Chairman. Block Medical officer may be the convener of the committee. Senior officials from Health and other related departments, representatives of civil society organisation, may be the members of this committee. At least there should be five members in the committee. The Block may form any other representative body for smooth implementation of the LLIN distribution and the campaign along with it.

Responsibility and functioning of the committee:

- i. The block planning for LLIN distribution may be approved by committee.
 - ii. Review of the distribution progress and the use of LLINs on monthly basis.
 - iii. Resolve any local conflict that may occur during distribution or afterwards.
- 3. Sub-centre:** The Male Health Worker will facilitate the distribution process through GKS. If there is no **Male Health Worker then the Male Health Supervisor** will take the responsibility for the targeted villages.
 - 4. Gaon Kalyan Samiti:** the GKS will be the distributing agency of LLIN to the beneficiaries. In addition to this GKS will be involved in community mobilization, awareness generation on LLIN as well monitoring & supervision of pre & post distribution activities.

9. Logistics and transportation mechanism:

- After receiving the LLIN from Gol, these will be supplied by **NVBDCP, Orissa** to District Head Quarters with prior intimation of 7days.
- District must keep their ware house ready for temporary storage facility and action plan for distribution to the high risk villages as per the guideline.
- District will supply the LLINs to Block HQs and from there distribution will be made to concerned GKS and Health Workers will be accountable for the same.



10. Financial guideline for LLIN distribution

1. Logistics including transportation cost is to be met from office expenses under planning and administration.
2. Sensitisation/training of GKS members and other stake holders is to be met from training cum sensitization fund in World Bank districts & Village level awareness campaign fund in GFATM districts.
3. Sensitization of Kalyani club & IHP/ISP on LLIN will be integrated in NRHM RCH II 2009-10 IEC/BCC package.
4. Monitoring and supervision is to be met from the head hiring vehicle/POL and TA/DA
5. Register, format, money receipt etc .to be met from office expenses.