An update on the outputs of the workshop on long-lasting insecticide-treated nets (LLIN) prioritization, which was held in Basel on October 14-15, 2013, was given. The objectives of the workshop were (1) to draft recommendations for the Vector Control Technical Experts Group (VCTEG) on how National Malaria Control Programme (NMCP) managers should allocate LLINs under conditions of scarcity in order to minimize deaths and burden of malaria, (2) to identify next steps and academic papers to further quantify and explore the issues arising from this question and (3) to establish a consensus among the modellers on the validity of the recommendations.

The workshop was successful in achieving all three objectives. The three different groups of modellers (Imperial College, Swiss Tropical and Public Health Institute (Swiss TPH) and Clinton Health Access Initiative (CHAI)) all agreed that while their individual models used different outcomes (Entomological Inoculation Rate (EIR)/transmission for Swiss TPH and parasite prevalence for Imperial College) the results in terms of prioritization were the same.

The group drafted a decision tree based on the modelling data which highlighted the following points:

1. The application of this process was a crisis mitigation strategy, not a program management strategy- universal coverage (LLINs available for the entire at-risk population) remains the objective for country programs.
2. A first and important step is to quantify the extent of the gap and initiate resource mobilization work to find funds to fill the gap.
3. Once the gap has been established and quantified, then the NMCP should revisit their definition of the “at-risk” population. There may be pockets, particularly in core urban areas, of populations who are really not at risk of malaria infection but are currently still included in the denominator.
4. Areas of very low risk should next be identified and the populations estimated. These are also likely to be urban or highland areas. These populations would then be “last in line” for available nets.
5. Timing is key, both in terms of the shortage of nets and in terms of the age of the standing crop of nets in specific areas.
6. All the models agreed that a strategy to “spread nets thinly” by giving top priority to biologically vulnerable groups (pregnant women and under-5 year old children) would be the best.
7. Next historically high transmission areas which have recently been covered with LLINs and seen reductions in transmission (and thus are at high risk of rebound effects due to reduced immunity) should be identified and given priority.

8. Next priority would go to historically high transmission settings with no evidence of recent reductions due to LLINs.

9. From this point on, prioritization follows transmission intensity until the nets run out.

Key issues discussed on the workshop included:

- The models show that the greatest impact of LLIN distribution occurs in intermediate transmission zones, as the decrease from moderate levels of transmission to very low levels provides huge reductions in burden. This needs careful interpretation however; as it does not necessarily follow that the “best” or most ethical prioritization would give preference to intermediate transmission zones over high transmission zones.
- The method of distribution should vary according to the local context.
- There is a critical need for local level surveillance data to allow practical identification of differing zones of transmission or disease intensity. Using a district level classification, for example, ignores huge variations from community to community.
- Integration of LLIN coverage with other malaria control interventions, particularly case management, is needed in order to further define risk, and to provide a more complete picture of potential burden, by allowing a measure of access to effective treatment. This was beyond the scope of this workshop, but does need to be done soon.

The notes from the workshop meeting are being written up as a draft set of recommendations for circulation to the VCTEG. Once approved by the VCTEG, the recommendations will be forwarded to the Malaria Policy Advisory Committee (MPAC), which makes policy recommendations to the Global Malaria Programme (GMP). If endorsed by the MPAC, it is very likely the recommendations will become WHO/GMP technical guidance to Ministries of Health.

Discussion

- Stratification and better mapping can help and will become extremely important. However, in most of the countries there are no data in local level and therefore it is impossible to do stratification in the communities.
- Be careful with the assumptions used in the models.
- Reservoirs can be found in the low transmission settings, i.e. pre-elimination phase. The current models do not address such questions.
- An example from Rwanda tells us that the temporary workers (migrants who leave in camps, with no immunity) serve as a reservoir.
- It will be very important to package the message correctly.

Data gaps in monitoring continuous distribution-Matt Lynch, JHU CCP, USA

(1) Household data: adding questions on ‘sources of nets’ to the malaria module- advocacy with the RBM Monitoring and Evaluation Group (MERG)

The Continuous Distribution of the nets is promoted by both the ANC and EPI channels. However, there are no data available and therefore it was suggested to request from MERG to change the core malaria module and add questions asking for example ‘where did you get this net?’ Additionally and
in collaboration with the Malaria in Pregnancy Working Group it was suggested to add another question on the antenatal module, i.e. ‘did you receive a net on your 1st antenatal visit?’ Correct phrasing is essential of such questions.

**Discussion**

- The decision to edit/add new questions on the modules is not be taken during the MERG meetings but in the Indicator and Survey Household Task Force.
- It is necessary to show reliable data to the Task Force in order to convince them for the inclusion of the new questions.
- Supply chain management data are not always available.
- The Malaria in Pregnancy Working Group has a monthly teleconference. Members of the Continuous LLIN Distribution Systems Working Group will participate in order to follow up on the inclusion of the questions on the antenatal module.

**Towards consensus tools for minimum essential monitoring of LLIN campaigns**

The Alliance for Malaria Prevention (AMP) is preparing a statement on M&E best practices for partners supporting national long-lasting ITN mass distribution campaigns. It will be circulated for comments to the AMP members in about 4 weeks and the aim is to be presented in the annual AMP meeting. This process is supported by RBM VCWG and the draft document will be also circulated via the VCWG mailing list for comments.

**Feasible methods for local monitoring of LLIN coverage**

It is necessary to answer questions, such as: When another campaign is needed? How many nets are still in use in the household after two years? How many nets do we need to pump in an area, after how many years, and which channels can be used for the distribution?

**Discussion**

- Timing is very important. Proper sampling and implementation is essential.
- NetCALC can help based on the data availability.

**Increasing collaboration between the Continuous Distribution work stream and the Sub-regional Networks (SRNs)-Michael Macdonald, WHO/GMP and RBM VCWG**

All Working Groups shall support the SRNs. The Continuous LLIN Distribution Systems Working Group is very productive and a way to support the SRNs is via the dissemination of the best practices documents produced by the Working Group.

Every year, four sub-regional meetings held by EARN, CARN WARN and SARN. Kojo Lokko travelled to those meetings to promote the NetCALC for the planning of Continuous Distribution among the NMCP members. There is a lot of potential for dissemination.

The new of funding model of Global Fund is supporting national strategies development. What are the ways that the Working Group can contribute to the development of the national strategies of the continuous LLIN distribution? The outputs of this meeting shall be communicated to the Harmonization Working Group (HWG) for inclusion to the gap analysis. The Working Group shall also communicate directly with the countries.

The data from the school distribution (Tanzania) and Cross River (Nigeria) studies will be available for cost-effectiveness analysis.
Key questions to be addressed next year and agenda for February annual meeting

1. The family income in Africa has increased the last years. Some participants argued that the campaigns destroy private sector and indeed a sustainable continuous distribution model is needed. How can we have the full engagement of the private sector? The global malaria community understanding is needed. A panel discussion on ways to mitigate these barriers is proposed.

2. During pre-elimination and elimination, the countries need guidance. What options are available/needed in the different instances?

3. Mobile phone companies shall be engaged in the delivery of nets.

4. After the scaling up of the nets the next step is continuous distribution. Swift from ITN to LLIN. How can we support these processes? What is the best way to create these markets? i.e. vouchers.


6. New tools applicable to vector control shall be always considered.

7. Disposal of nets. Absence of a statement/guidance, cause confusion. However, the problem is not described in specific terms, and therefore, no action is taken. Whoever is interested shall collect data.

8. The distribution of the nets shall be included in the central family food security program. The Bill & Melinda Gates Foundation (BMGF) runs an agricultural program called Agre with focus on increase sustainable agriculture. It will be a good idea to distribute nets via this network.

9. Global Fund shall be involved at the VCWG-9 meeting and give their perspective and update on the new funding model.

10. What is the future of the relationship of VCWG and AMP?

11. Discussion on retail and subsidy mechanism, learn from the Population Services International (PSI) experience and NetMark lessons.

12. Stratification and mapping of net distribution.