**9th Continuous LLIN Distribution Systems Work Stream Meeting**

**13.00-15.00, Thursday 20th February 2014**

**Auditorium, IFRC, Geneva**

**Co-chairs: Jayne Webster & Kojo Lokko**

**Rapporteur: Lucy Tusting**

Kojo Lokko opened the meeting, drawing attention to the Continuous Distribution (CD) eToolkit, available online, which includes the NetCALC tool, CD guides, country cases studies, training materials, Social and Behaviour Change Communication (SBCC) materials and Monitoring and Evaluation (M&E) tools. These tools can be accessed on the Roll Back Malaria website as well as: [http://www.k4health.org/toolkits/continuous-distribution-malaria](http://www.k4health.org/toolkits/continuous-distribution-malaria).

**Evidence on ANC delivery of LLINs: what data is available and what data is needed? – Jayne Webster, London School of Hygiene & Tropical Medicine, UK**

Delivery of LLINs through antenatal clinics (ANC) is currently policy in 34 malaria endemic countries in Africa; however effectiveness has only been assessed in a few geographic locations and at a small scale. To evaluate the effectiveness of this delivery strategy it is necessary to have data on ANC attendance and LLIN availability, LLIN delivery, uptake and use. However the Demographic and Health Surveys (DHS) and the Malaria Indicator Surveys (MIS) currently only include indicators for the first of these, ANC attendance. Data on ANC delivery was presented for Segou district, Mali and Nyando district, Kenya. The required data could be collected by adding two simple questions to the DHS and MIS: (1) ‘Where did you obtain this net?’ (with response categories including ANC) and (2) ‘When you saw someone for antenatal care were you given a mosquito net?’ (to quantify the proportion of pregnant women attending ANC who were given an LLIN). The Vector Control Technical Experts Group (VCTEG) have recently recommended the use of these indicators. A formal request should be made to the Monitoring and Evaluation Reference Group (MERG) by both the VCTEG and the VCWG that these two questions be added to the DHS and the MIS. In addition, DHIS2 (an electronic health management information system used in many African countries) already has an indicator on LLIN receipt at ANC, and the denominator could be added to this.

**UNICEF experience with ANC supply systems – Valentina Buj, UNICEF, USA**

The work of UNICEF in ANC delivery of LLINs in Huila province, Angola and in Sierra Leone was outlined. UNICEF faces numerous challenges to distributing LLINs, including long lead times and procurement, campaigns using LLINs designated for routine channels such as ANC, difficulties in quantifying the demand for LLINs through ANC and other continuous distribution systems, the logistics of distribution, transportation (i.e. the less mass-transport that can be used, the more the cost increases), difficult terrain, mechanisms for distribution (e.g. fixed point vs house to house), how to integrate different interventions, installing LLINs in the home, communicating public health messages, warehousing and storage. Strategies used to increase success include strong leadership at the central level, good logistics, using multiple strategies, using a variety of transport means and avoiding stockouts.
Discussion

- **Evidence on ANC delivery of LLINs**: A summary for MERG with the options for the DHS has been produced. If there is reluctance to add questions to the DHS since it is already long, a tick box for receipt of a net could be added to the existing question on which ANC services a woman has received.
- **ANC delivery of LLINs**: LLINs should be given at the first ANC visit to prevent malaria in pregnancy; this is UNICEF policy. Supervision is important to ensure that women are offered nets at the clinic.
- The use of routine nets as a buffer in distribution campaigns undermines requests to donors for funding for nets.

**MEDA: Ghana and Tanzania – Thomas Dixon, Mennonite Economic Development Associates (MEDA), Canada**

E-Coupon logistics focus on delivery (mapping where nets are sold to determine where and when retailer replenishment must occur), discount (providing individual consumers a tailored, flexible transparent subsidy) and demand (creating demand through price subsidy and behaviour change communication (BCC); providing information by area. E-Coupons are generated by SMS, using a short code, as in the Tanzania National Voucher Scheme, which operates through clinics, and the Ghana Pilot scheme, which operates though clinics, schools, employers and self-issuance. E-Coupons can be redeemed at retail shops by the retailer sending an SMS incorporating the beneficiary’s coupon number and another short code. In Tanzania, by December 2013, the e-Coupon was operational in 1,928 clinics and 1,989 retailers in all regions; 1,191,041 vouchers had been redeemed. In Ghana, by January 2014, primary school and employer e-Coupons became operational and over 4,000 e-Coupons had been issued with an approximately 50% redemption rate. An online mapping tool is now available which displays e-Coupon issuance and redemption in Tanzania.

**PSI: Movercado/Mozambique experience – Angus Spiers, Population Services International (PSI), USA**

A video on the Movercado model was shown, illustrating the ‘Movercado Eco-System’, which uses a largely cash-free mobile money system in Mozambique to provide LLINs. ([http://www.youtube.com/watch?v=6pODbb7alcg](http://www.youtube.com/watch?v=6pODbb7alcg)). Vouchers can be redeemed at branded shops and key messages are delivered via text message. A private sector distribution network supplies shops and pharmacies. The system allows tracking of redemptions and of the success of interactions, all geographically linked through Google maps. Movercado integrates the delivery of LLINs with communication through text messaging giving advice on health interventions and the attendance at health facilities for mothers and their babies. PSI is now looking to scale up Movercado elsewhere.

**Role of the private sector: potential and reality – Albert Kilian, Tropical Health LLP, Spain**

High LLIN coverage has been achieved in some places including The Gambia, Mali and the Mekong region. The contribution of the commercial LLIN market to scale-up is currently small but has potential. The Markets for Health Framework, developed by the World Back Institute and University of California San Francisco, outlines the market forces at play in LLIN distribution campaigns and unstructured markets, both of which have disadvantages. After campaigns, need grows which can be
turned into demand, and it is recommended that demand-driven ‘pull systems’ should increasingly dominate continuous distribution strategy. In order to do so, it is necessary to understand both the market and the role of the product in public health. Practical means to achieving this include creating a platform for public-private dialogue, marketing campaigns, controlling counterfeits, varying subsidy levels, allowing local tendering and investing in local production where feasible. Even the poorest homes can access LLINs through the commercial sector (see 2010-11 DHS, Senegal). Threats to market development include leakage at the warehouse/transport stage and counterfeits. The private sector can contribute to sustaining universal coverage if (1) LLINs are seen as consumer goods, (2) countries and donors commit to give continuous distributions the opportunity to develop and engage the private sector (3) and thorough country-specific market analysis is conducted.

Discussion

• **E-Voucher scheme:**
  − A large number of LLINs are recommended by WHOPES and it was suggested that this may complicate the introduction of e-Coupon schemes. However, there is room for suppliers in these systems. Experience from Ghana indicates that the voucher scheme was the best means to engaging the private sector. For those without mobile phones, e-Coupons can be issued on paper.
  − There are ethical issues involved in targeting messages that may contain sensitive information (e.g. a husband may not know his wife is pregnant) or collecting data on redemption unless participants without consent. PSI has a data governance council to regulate this.

• **Engaging the private sector**
  − Uganda and Tanzania could be good candidates for engaging the private sector in LLIN distribution.
  − Disposable incomes in Africa are increasing, representing an opportunity for the private sector to participate more in LLIN distribution.

*Results from NetWorks Ghana eastern region continuous distribution – Albert Kilian on behalf of Joshua Ofori, Johns Hopkins University Center for Communications Programs (JHU CCP), Ghana*

The study aimed to assess whether continuous distribution of LLIN through schools successfully increased LLIN coverage. Activities began in November 2010 with two hang-up campaigns, with baseline surveys, school distribution, health facility distribution. Data on LLIN ownership indicates that continuous distribution contributed substantially to overall LLIN coverage. 46% LLINs were delivered through schools, 20% through ANC and 14% extended program of immunisation (EPI). The data indicate that continuous distribution effectively targeted those who had not received a campaign net. Campaign delivery is pro-poor and continuous distribution is less equitable, though as assessed using the concentration index, it is not far from equitable. The continuous distribution LLINs appear to have reached households that did not receive LLINs in the mass campaigns.

*Prioritization and LLIN delivery – Jo Lines, London School of Hygiene & Tropical Medicine, UK*

WHO policy remains universal coverage across all age groups however constrained resources may necessitate prioritisation. Net coverage can be targeted (1) geographically or (2) to the most vulnerable group, and with three levels of coverage: (1) no nets, (2) under-5s and pregnant women and (3) all ages. On behalf of the Vector Control Technical Experts Group (VCTEG), modelling groups...
at Imperial College and the Swiss Tropical and Public Health Institute (Swiss TPH) were asked to model the distribution of LLINs for maximum impact in conditions of insufficient LLINs to achieve universal coverage. Swiss TPH concluded that all under-5s should be covered in all areas and all ages covered in high transmission areas. Imperial College concluded that it is not optimal to target geographically unless the high prevalence area has a parasite prevalence in excess of four times that in the low prevalence areas. The recommendation is to define ‘very low risk locations’ where zero coverage is assigned. In all other locations, LLINs should be assigned to vulnerable groups. Any remaining LLINs should be assigned to highest risk areas. Risk must be defined pragmatically within each country.

Discussion
The value of targeting hotspots was discussed; this is likely to be only applicable in areas of lower transmission.

Draft 2014 Work Plan
The Work Stream could (1) recommend that the VCWG and VCTEG make a formal request to the MERG for consideration of the inclusion of both questions on the DHS and MIS, (2) support documentation for programmes on potential analysis using these survey questions for evidence-based strategy development and programme improvement and (3) develop documentation and possibly provide technical support on how to use the DHIS2 to improve programmes.

A draft Work Plan will be circulated by email.