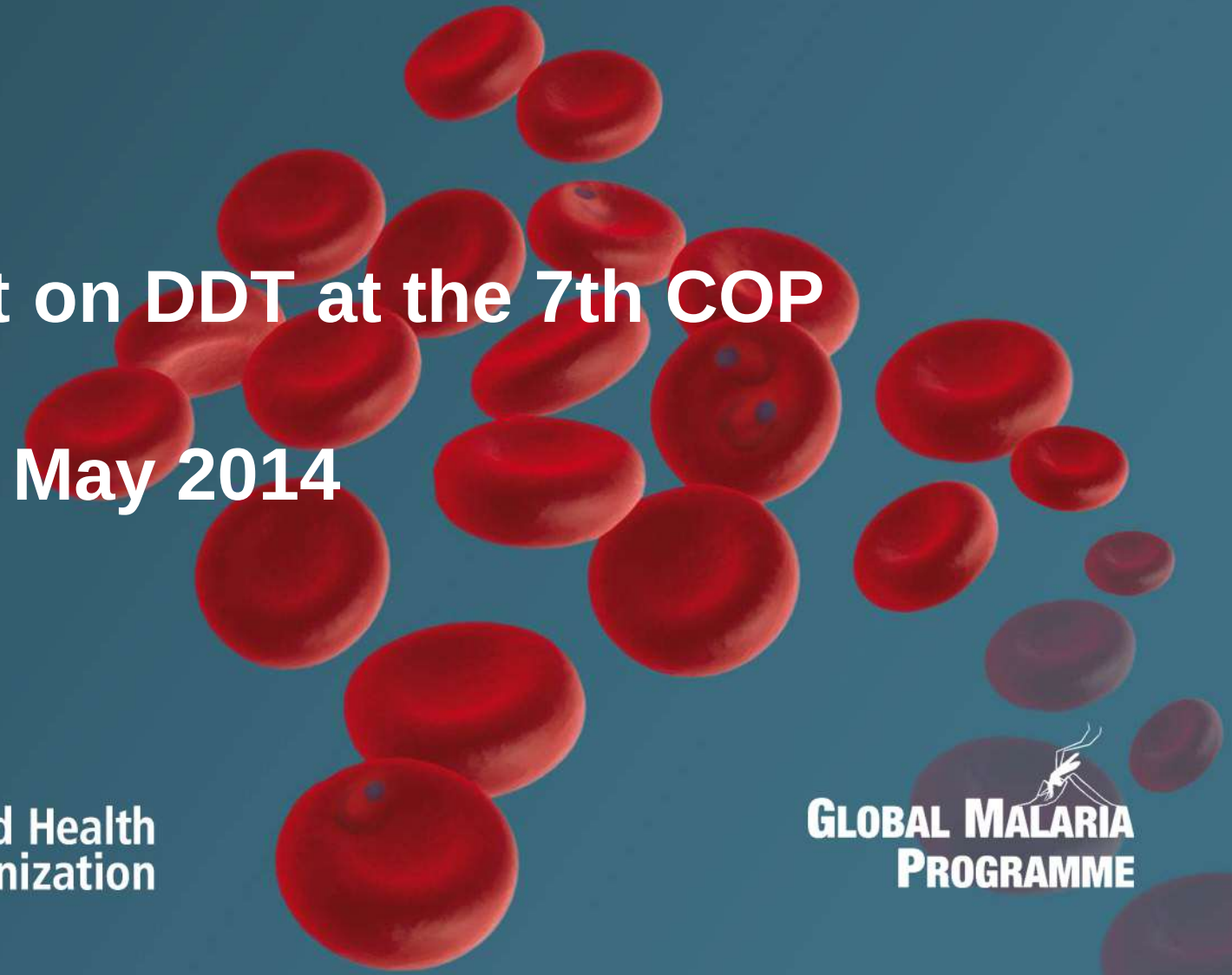
Policy updates on Malaria Vector control



Side event on DDT at the 7th COP

Geneva, 5 May 2014

World Health Organization

GLOBAL MALARIA PROGRAMME

Coordinating International Investments in Malaria Vector Control

- **Maintain and promote up-to-date evidence and consensus-based recommendations, norms and standards for malaria vector control; and**
- **Stimulate the development and testing of new vector control technologies, tools and guidelines**

Malaria Policy Advisory Committee (MPAC)

MPAC provides independent strategic advice and technical input to WHO for the development of policies related to malaria control and elimination.

- Established in 2011, inaugural meeting Feb 2012
- Appointed by WHO Director General for 3 -year terms, renewable once
- 15 members with a broad range of expertise and professional affiliation
- Current chair: Dr Kevin Marsh
- Seven meetings to date
- Next meeting November 2015 in Geneva
- MPAC groups – TEG: VCAG & VCTEG: and ERG convened on limited period

Associated documents available on GMP website.
All meeting reports published in the Malaria Journal.

Vector Control Technical Expert Group

Topics reviewed in 2014

- Combining IRS and LLINs: guidance endorsed by MPAC in March
- Sound management of old LLINs: recommendations endorsed by MPAC in March
- GPIRM implementation update: note reviewed by MPAC in Sept 2014
- Control of residual malaria parasite transmission: guidance note reviewed and endorsed by MPAC in Sept 2014

Recommendation: Combining IRS with LLINs

- Limited evidence that combining IRS with LLINs in areas of high LLIN coverage reduce malaria burden

- Control programmes should deliver either IRS or LLINs at high coverage and high standard (quality) and not as a means to compensate for the deficiencies in the implementation of the primary intervention

- IRS and LLINs can be combined when managing insecticide resistance - using non-pyrethroid IRS

- Programmes that are currently implementing both should evaluate the effectiveness of the two intervention – evidence is needed

http://www.who.int/malaria/publications/atoz/who-guidance-combining-irs_llins-mar2014.pdf

Recommendations: Control of Residual transmission

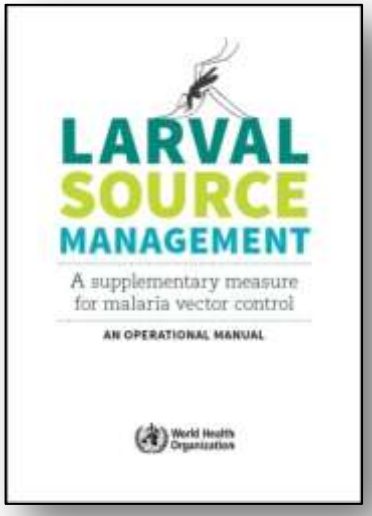
1. NMCPs in collaboration with research institutions should **generate local evidence on the magnitude of the problem of residual transmission of malaria**, including information on human and vector behaviour, and intervention effectiveness.
2. Industry and their partners are encouraged to **develop new vector control tools to address residual transmission**. Resources will be needed to support development, evaluation and implementation of such tools.
3. National regulatory authorities should ensure that **registration processes support the rapid availability to the local market of validated new vector control products**.

Update: implementation of the GPIRM in malaria vectors

- The Global plan for IRM (GPIRM) was launched in May 2012, as a collective strategy to tackle IR. Resistance particularly to PY has since increased at an alarming rate, evidence emerging from some areas indicating IR is compromising effectiveness of VC.
- Some progress made: 1) enhancement in capacity and resources for insecticide resistance monitoring, 2) establishment of global and regional **IR databases**, and 3) development of **new IRS formulations** with extended efficacy, and 2nd generation PBO+ PY LLINs.
- But adoption to policy and operational implementation at country level have been poor due to a lack of political, with major financial, human and infrastructural resource deficiencies.
- Urgent efforts needed to ensure correct use of existing interventions and availability of new tools to maintain the effectiveness of malaria VC.
- **WHO is now conducting a comprehensive situation analysis in order to develop a global response plan.**

Recommendation: Larval Source Management in Sub-Saharan Africa (April 2012)

- Anti-larval measures are likely to be cost-effective for malaria control ONLY in settings where the vector breeding sites are: a) few, b) fixed and c) findable.
- In sub-Saharan Africa:- Larviciding measures
  - should never be seen as a substitute for ITNs or IRS in areas with significant malaria risk;
  - most likely to be cost effective in urban areas, include areas with a short transmission season, cool temp extending the duration of immature stages, breeding sites that are man-made & homogenous;
  - In rural setting larviciding is not recommended unless there are particular circumstance limiting breeding sites and evidence confirming such measure can reduce malaria incidence.

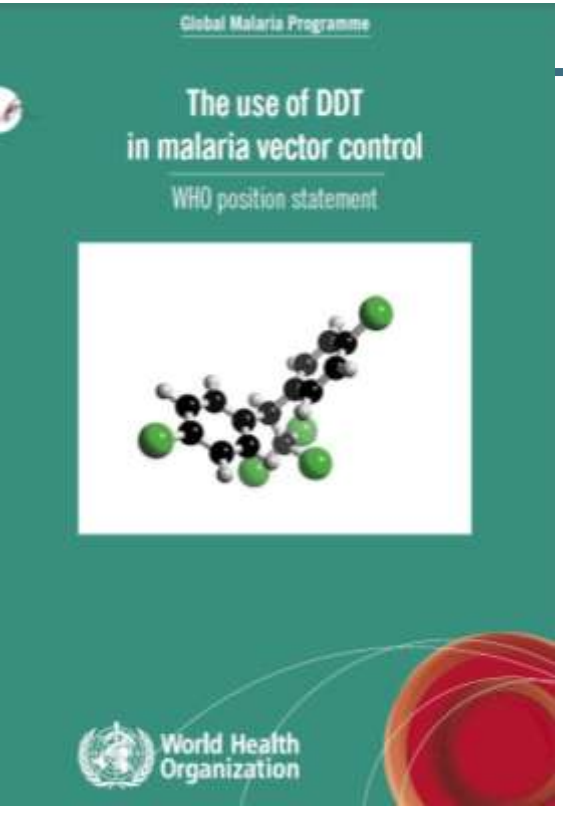


- Key challenge: continued promotion of larviciding in potentially inappropriate settings
- Guidance on monitoring and evaluation of LSM in control and elimination settings

WHO Global Strategic Framework for IVM

- Defined IVM as “a strategy to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease vector control”
- A multi-disease control approach and systematic application of a range of interventions, often in combination and synergistically.
- To facilitate efforts to implement IVM for disease vector control, WHO developed
  - Core structure for training curriculum on Integrated Vector Management (WHO, 2012);
  - Guidance on policy development for Integrated Vector Management (WHO, 2012)
  - Handbook for Integrated Vector Management (WHO, 2012);
  - Monitoring and Evaluation Indicators for Integrated Vector Management (WHO, 2012).
  - A toolkit for Integrated Vector Management in Sub-Saharan Africa

WHO Position Statement on DDT



WHO recommends DDT only for Indoor Residual Spraying.

Provided that the guidelines and recommendations of WHO and the Stockholm Convention are all met, and until locally appropriate and cost-effective alternatives are available for a sustainable transition from DDT.

Condition for use of DDT should be

1) Evidence based (susceptibility to local mosquitoes), and proper IR monitoring plan
2) Reported to WHO and Stockholm Convention
3) Standard operation procedure for safe use and handling, regulation to avoid leakage and misuse of pesticide

Vector Control Technical Expert Group

Topics for review in 2015

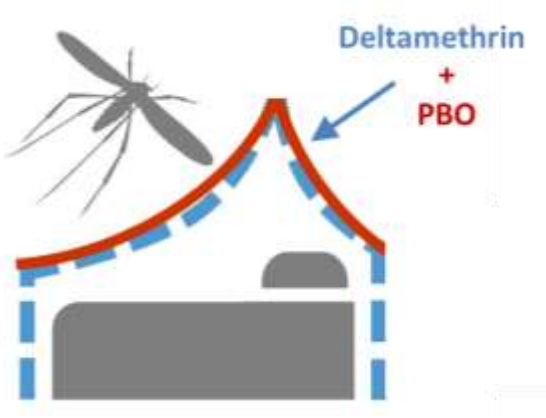
- Guide for testing LLIN with claim of efficacy against substantive pyrethroid resistance
- Guidance on where it is not safe to scale-back vector control coverage after malaria transmission has been reduced.
- Global Insecticide Resistance Response plan

Vector Control Advisory Group

- VCAG was established in 2012 to review evidence on new paradigms and technologies for vector control
- It is expected this process will shorten the time from development to deployment of newly validated vector control tools for control of malaria and other vector-borne diseases.
- To date, this expert group has reviewed 16 submissions
- Established 8 new paradigms for vector control

Vector Control Advisory Group

- In Feb 2014, VCAG assessed the paradigm **Vector control products for use in areas of high insecticide resistance**



- Prototype claim = the PBO + pyrethroid LLIN increase mosquito death and decrease human infection in areas of high pyrethroid resistance
- VCAG reviewed evidence and supported prototype claim of increased bio-efficacy of PBO + pyrethroid LLIN compared with pyrethroid only LLIN where mosquitoes have metabolic resistance mechanisms.
- **But where do you deploy PBO + Pyrethroid nets considering heterogeneity and complexity of resistance?**

Expert Review Group….1

- Operational consideration for deployment of Pyrethroid + PBO LLIN with improved efficacy in areas with substantive pyrethroid resistance
  - Due to the complexity of pyrethroid resistance (frequency, intensity and mechanism), it is still unclear under which conditions deployment of these nets is justified on the basis of increase effectiveness against malaria and/or for application in a resistance management strategy.
  - Group will review evidence that PBO nets can reduce malaria cases under specific scenarios of transmission and PY resistance
  - Define scenarios under which PBO nets are predicted to be more cost effective alternative to standard LLINs
  - Review meeting planned for July 2015

Expert Review Group …. 2

- Evidence review on the use of Ivermectin to prevent or reduce malaria transmission
- Ivermectin MDA for control of Oncho, LF and other helminth. It also kills mosquitoes
- TOR
  - Determine the expected level of ivermectin impact on malaria transmission
  - Define the target product profile (TPP) of ivermectin as a malaria transmission blocking tool
  - Identify evidence gaps and define appropriate studies to address these gaps
  - Determine ivermectin clinical and regulatory development path for malaria deployment

Conclusion

- In addition to operational constraints, vector control is faced with two major threats – insecticide resistance and vector behaviour or residual transmission
- While waiting for new tools and as national capabilities are built, there is a strong need to ensure that the impact of current tools is maximized
- WHO has created relevant policy mechanisms and has developed appropriate policy and technical guidelines in response to these needs
- In order to have desired impact on malaria, broader malaria partnership is required to support countries to translate WHO policies and guidelines into action at the country level.

Thank you

All documentation on the WHO malaria website

www.who.int/malaria/publications