MalaResT project

Evaluation of repellents as additional method to control residual transmission in malaria pre-elimination settings

A project funded by the Bill & Melinda Gates Foundation
To study the added value of repellents to ITNs for the control/elimination of malaria in Cambodia

- Epidemiology study
- Entomology study
- Social science study
Ratanakiri province, Cambodia
- Repellent used (Picaridin) was effective during 5 hours (>95% protection against vector bites) = personal protection against malaria can be expected

Van Roey, Mao S. et al PloS Negl Dis, 2014, 8, e3326
Distribution of Repellents and LNs and IEC campaigns

- Information & Education:
- in 2013 with movies on repellents and LNS
- Repellent distributors in each village (135 distributors, 13 supervisors)
Contact with repellent distributors and consumption of repellents

Contact with distributor every two weeks during 9 months = 100%

Somony et al. In preparation
Conclusion: No significant difference in PCR Plasmodium prevalence between control and intervention arm after one year (2012) and after two years (2013). No community protection could be demonstrated.
Secondary outcomes

Serology

PCD

Institute of Tropical Medicine | Biomedical Sciences
Effective use of topical repellents

Despite a high acceptance (>90%) and high reported use (47 to 76%) => low observed daily and consistent use (7 to 15%).

Gryseels et al.
CONCLUSIONS

- Repellent is very effective against vector bites and could assure personal protection against malaria (cfr Hill et al. BMJ. 2007 17;335)
- Access to repellent was considerably improved during the second year of the trial.
- High acceptability for repellents in the community
- However low daily and consistent use = low effective coverage

=> Low effective use of repellents explain probably the absence of additional community protection against malaria.
Meta-analysis (Wilson et al. MJ 2014, 13:446)

Substantial heterogeneity between studies

Design individual vs. community protection.

Conclusion: ineffective at preventing malaria morbidity.

But compliance is probably the main issue
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