MULTI-ARM IRS-ITNs COMPARISON IN THE DEMOCRATIC REPUBLIC OF CONGO

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Work done under the auspices of the Alliance pour la Recherche Clinique et Epidémiologique en RDC (ARCEAU)
Study site

- TBD within a radius of 200 Km from Kinshasa
- Accessibility / feasibility
- High malaria incidence rates at baseline
- Relatively low coverage with LLINs (DL and IRS groups)
- Collaborative local health services and health system
- Support by National Malaria Control Programme
- GLP-level laboratory available in Kinshasa (through ARCEAU)
Area: 2,345,409 km² (4 times the size of France)
Population of 70 million
Second most malarious country in the world
Renewed malaria control efforts since 2008 (GFATM, WB and soon PMI)
Four different intervention arms (Cluster-randomized controlled trial):

1. Durable wall Lining (DL) alone
2. Long-Lasting Insecticidal Nets (LLINs) alone
3. Combination of DL and LLINs ("full protection group")
4. Conventional IRS (insecticide similar to the one used in DL)
The six comparisons that are possible with a 4-arm trial

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• **Primary outcome:** incidence of documented clinical malaria, assessed by passive case detection (longitudinal study). Follow-up period would ideally be 3 years.

• **Secondary outcomes:** (children under age of 5 years): parasitaemia, mean haemoglobin, prevalence of fever, prevalence of hepato-splenomegaly (repeated cross-sectional studies including a baseline study)

• **Entomological outcomes:** mosquito resting density inside houses, indoor and outdoor biting rate as estimated by CDC light traps (continuous assessment).

Conducted as close as possible to GCP / GLP standards for non-regulatory trials