

Project Title	Indoor Residual Spraying (IRS)
Client	US Government Presidential Malaria Initiative (PMI)
Partners	RTI (prime contractor), Liverpool School of Tropical Medicine, Crown Agents
Year(s)	2006-2011

Context

In 2005 President Bush pledged to increase funding for malaria prevention and treatment by more than \$1.2 billion over five years with resources increasing each year. The goal of the Presidential Malaria Initiative (PMI) is to reduce malaria deaths by 50% in target countries after three years of full implementation by achieving 85% coverage of artemisinin-based combination therapies (ACTs), insecticide treated nets (ITNs), intermittent preventive treatment for all pregnant women (IPT), and indoor residual spraying (IRS). This effort eventually will cover up to 175 million people in at least 15 African countries most affected by malaria. USAID is the lead US Government Agency implementing the PMI. LATH is part of a consortium of partners who will support African countries to carry out the IRS component of the PMI and provide support for IRS in USAID malaria programmes in other countries.

Programme Objectives

To achieve the overall PMI goal, the objectives of the IRS programme are to:

- Provide technical advice and support in the planning and implementation of sustainable IRS activities for routine malaria control operations
- Design, implement and evaluate training and supervision in key IRS skill areas to ensure that the Malaria Control Programme (MCP) in each PMI country will have a functioning IRS component by the end of the PMI
- Design, implement and monitor an IRS procurement logistics plan
- Build the capacity of each country's MCP such that its national staff are able to conduct entomological monitoring of relevant factors, including detecting behavioral as well as physiological insecticide resistance among the mosquitoes in its target spraying areas
- Prepare environmental impact assessments
- Conduct performance monitoring and reporting of the programmes adherence to WHO's IRS technical standards, the quality of training and ongoing supervision, the efficiency and reliability of procurement activities, and compliance with environmental procedures.

LATH's role in the programme is to provide technical assistance (TA) in the monitoring and management of pesticide resistance; to provide strategic advice to national governments on the rational choice of pesticides; and to undertake cost-effectiveness analyses of different types of pesticide usage.

Approach

The programme is being implemented by RTI in partnership with National Malaria Control Programmes in selected PMI countries. RTI is supporting countries in all aspects

of implementing IRS programmes for malaria control. The centre for technical operations and country support is based in Nairobi, Kenya. LATH has two long term technical assistance posts based in Nairobi, providing support to countries on insecticide selection and entomological surveillance. These staff are managed jointly by LATH and RTI and backstopped technically by experts from LSTM.

Expected Outcomes

The expected outcome of the overall IRS programme is the development of functioning large scale IRS programmes in up to 15 PMI countries. LATHs support will ensure that the pesticides chosen for use in these programmes will be effective and will not contribute to the problem of insecticide resistance. LATH will also help to develop and support country specific entomological monitoring and surveillance systems to track existing and emerging insecticide resistance, and provide strategic advice to countries and PMI on the most appropriate choice of insecticide in any given location. Documenting the cost effectiveness of IRS programmes will be an essential advocacy tool to help countries obtain additional funding support for IRS programmes. LATH will support countries as requested to carry out cost effectiveness analysis of IRS programme activities.

Results to Date

IRS programmes are underway in most PMI countries and others are in the planning stage. So far LATH has supported this process by developing two practical tools for use by National Malaria Control Programmes and RTI staff responsible for IRS activities. The first provides guidance on selection of appropriate insecticides based on best available evidence of current insecticide resistance. The second is a protocol to guide programme managers on how to collect cost data to inform a cost effectiveness analysis. These tools will help to ensure that the IRS programmes run as effectively as possible and will help to demonstrate the cost effectiveness of IRS programmes. In Uganda LATH has recently carried out entomological investigations on insecticide resistance and the residual action of insecticides on different sprayed surfaces. In Mozambique we have established sentinel sites and are monitoring changes in vector density, insecticide resistance and residual action of insecticides. Planning is currently underway for a trip to Liberia to support insecticide selection and design of entomological monitoring systems.