



INDOOR RESIDUAL SPRAYING - A CALL TO ACTION

Indoor residual house spraying (IRS) is a highly effective method of malaria control. Unfortunately it remains underutilized in sub-Saharan Africa, where, each year, malaria kills over a million people and drains the continent of \$12 billion. World Malaria Day 2008 focuses on malaria across borders – some of the best cross-border malaria control programs rely heavily on IRS. Yet most donor agencies are loath to strengthen IRS programs in Africa, train medical entomologists to run them, and invest in new insecticides. AFM has compiled data and information on IRS to issue a call to action for donors, malaria country governments, the private sector, UN Agencies and other multi-lateral organizations to invest more in IRS.

In September 2006, Dr Arata Kochi, head of the World Health Organisation's (WHO's) Global Malaria Program, called for an expansion of IRS programs and for DDT to be used in malaria control. Currently, the only donor agency that has heeded this call and is investing substantial resources in IRS is the United States Agency for International Development (USAID) through the President's Malaria Initiative (PMI). Few other donor agencies fund IRS and even the Global Fund to Fight HIV/AIDS, TB and Malaria, the largest financier of malaria control and treatment programs, funds only a handful of IRS programs.

AFM has compiled a series of reports on IRS for World Malaria Day 2008:

- AFM's *IRS Basics* report demystifies IRS and discusses some of the frequently asked questions about IRS.
- In order to increase access to information on support for IRS and the status of IRS programs in Africa, AFM summarized a recent *WHO report on IRS in Africa*;
- AFM assessed the *PMI's IRS activities* from its FY08 Malaria Operational Plans; and
- AFM analyzed *Global Fund malaria grants* to determine how many included support for IRS. As the summary table illustrates, only a few programs are accessing Global Fund support for IRS in some capacity.
- AFM also gathered information on the *private sector's support for IRS* and its response to malaria more generally. While the private sector report is not exhaustive, it describes how some companies, mostly in the extractive industries, have supported highly successful IRS activities protecting many thousands of people in and around their areas of operation.
- AFM created 46 *country reports on IRS* explaining the status of IRS in African countries and detailing the successes and constraints of these programs.

With the global malaria agenda shifting to elimination and eventual eradication, IRS will have to play an increasingly important role. While malaria elimination and eradication depend on many factors, few regions have achieved elimination without IRS. If these goals are to be achieved, it is essential that donors, malarial country governments, the private sector, academics and NGOs increase support for IRS.

Several themes arise from AFM's investigations of IRS programs in Africa. Despite the WHO's call for more IRS, few donors support this intervention. The PMI remains the world leader in paying for IRS programs and in building the necessary expertise and skills to manage these programs; other donors must increase their financial and political support for IRS. In addition, malarial country governments need to increase their own domestic support for malaria control and IRS in particular. As AFM's country reports illustrate, several countries have not sought funding for IRS from the Global Fund because of existing support from the PMI. This demonstrates improved coordination and complementarities in malaria control funding; however, it does not change the fact that IRS is under-funded and in many countries depends heavily on continued financing from the PMI. This initiative provides detailed planning and financial information on malaria control programs well above any other donor agency. Other donors including the Global Fund need to make their commitments to malaria control more detailed and available to the public so that taxpayers can assess how their money is being used to save lives. Shining a light on malaria funding is the first and perhaps most crucial step to improving malaria control worldwide.

AFM is disappointed to find that monitoring and evaluation of IRS activities, remains poor in many countries. Furthermore, operational research is under-funded and is a crucially important component of any IRS program.

Currently there are only a handful of countries in Africa, mostly in southern Africa, that are able to manage and sustain their own IRS programs without external support. Although IRS is generally considered more complex and difficult to manage than insecticide treated net (ITN) programs, IRS is a vital component of malaria control. Malaria is a complex disease and controlling it is neither simple nor easy. Limiting funding of IRS because it is complex or considered 'unsustainable' is unacceptable and amounts to a self-fulfilling prophesy. IRS will remain 'unsustainable' as long as donor agencies, UN organizations and malaria country governments deem it unsustainable and direct funding away from IRS. The long history of successful IRS around the world and in Africa cannot be ignored.

AFM's 2008 World Malaria Day Call to Action on IRS:

- **Invest in new insecticides.** Public health programs rely on many old insecticides, originally developed for the agricultural sector. There has been scant investment in new insecticides and very little investment in finding new and better ways of using the existing insecticides. This must change. Rich countries have invested countless millions of dollars in the search for a malaria vaccine and in finding new malaria drugs – both worthwhile and important endeavors – but almost no new funds have been invested in the search for new insecticides. Insecticide resistance is a reality and will only spread, limiting the efficacy of both IRS and ITNs. We cannot allow our main methods of malaria control to be compromised because of inaction and limited investment in public health insecticides.
- **Invest in medical entomologists.** Malarial countries need to train and employ a new generation of scientists that can run and maintain effective control programs. Without trained medical entomologists, scientists and malaria control personnel, no elimination or eradication of the disease will be possible. Through its efforts, the PMI is managing successful IRS programs and domestic malaria control personnel are being trained to manage their own programs. However, much more can and should be done by malarial countries themselves as well as by other donors.
- **Increase funding for IRS.** The PMI is a global leader in IRS funding. Other donor agencies must also support IRS by providing insecticides, equipment and funds to train and employ spray personnel. The Global Fund provides relatively little support for IRS; malaria country governments should seek more funding for IRS from this agency. Malaria country governments should include IRS components in their applications to the Global Fund, but also invest more of their own health care budgets in IRS. Donor funding shifts according to political priorities. It is imperative for malarial country governments to prioritize their own spending so that malaria control can be sustained for generations to come.

In the 21st Century, we should strive to banish preventable and curable diseases. IRS is a time-tested method of malaria control and over the course of the 20th century has saved many millions of lives. Initial efforts to conduct IRS in the 1930s were limited due to the choice of insecticide. Pyrethrum, a natural insecticide, was initially used to kill adult mosquitoes however this insecticide remains effective for only a few weeks. This means that houses had to be re-sprayed every few weeks, making the intervention prohibitively expensive. This changed with the introduction of DDT to public health programs during World War II. Safe, cheap, easy to use and highly effective at repelling, irritating and killing mosquitoes, DDT also remained effective for up to 1 year. This long residual action meant that houses had to be sprayed only once a year and therefore with a given budget, many more houses could be sprayed. DDT allowed public health experts to dream of a world free from malaria. Finding new insecticides, training and employing medical entomologists and increasing funding for IRS will save lives and help to banish malaria. We cannot afford to wait.