INCORPORATING MALARIA CONTROL INTO SCHOOL HEALTH
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The international community has recognized the importance of health to schoolchildren. The scaling-up of school health is a major strategy of the Education for All (EFA) initiative, while the **Focusing Resources on Effective School Health** partnership (FRESH) has aimed to raise awareness of and implement appropriate strategies for effective school health, hygiene, and nutrition programs around the world. The continued integration of health in education fora has the potential to have impacts beyond even the immediate benefit to schoolchildren's education and health, such as through the promotion of healthy practices in the broader community and the use of school buildings themselves to improve access to appropriate prevention and treatment. Despite the significant progress made in the improved integration of the education and health sectors, the inclusion of malaria-related activities remains largely limited to project-specific initiatives rather than any co-ordinated effort through partnership.

As a pre-existing and operational framework, FRESH presents an excellent vehicle with which schools can address the problem of malaria. The **Roll Back Malaria** (RBM) partnership, comprised of organizations and individuals aiming reduce the worldwide malaria burden, and of which the World Bank is a founding partner, could work closely with FRESH and others in involved in school health to increase the use of existing malaria prevention and control interventions by targeted activities in school-health settings. In addition, the World Bank's comparative advantage in both the RBM and FRESH partnerships to address concerns that cross sectoral boundaries, such as malaria and school health, affords the Bank a unique opportunity to work with partners and increase the use of available and effective interventions for malaria control. Given the continued implementation and planning of school health activities through World Bank financing in ## countries, and the availability of money for malaria control in over 30 Bank financed projects, the opportunity exists for rapid integration of malaria into school health activities to both reduce the malaria burden and increase school attendance.

Differences in malaria epidemiology and at-risk populations must guide malaria and school health efforts

The integration of malaria-related activities into school health programs will require tailoring interventions to the variations in malaria – by parasite type and epidemiology – that occur worldwide. Malaria is a major contributor of morbidity in many parts of the world, including sub-Saharan Africa, much of Asia, and parts of the Americas. Over 95% of mortality due to malaria is found in sub-Saharan Africa.[1] In malaria-endemic regions of sub-Saharan Africa, the age groups at greatest risk for mortality from malaria are children less than five-years of age (younger than school-age) and pregnant women. In these areas of Africa, school children suffer much less mortality and morbidity from malaria, although pregnant schoolgirls may be an exception to this generality. In areas of unstable malaria transmission, the disease may be more significant in schoolchildren

given their lack of attained immunity, but onset is infrequent. However, though mortality from malaria may be low among school-children in sub-Saharan Africa, malaria is of substantial importance with regard to Early Child Development Programs. In schoolchildren in Africa, malaria represents 3-8% of all cause absenteeism, and up to 50% of readily preventable absenteeism and is therefore ob substantial importance to Early Childhood Development Programs.

In many parts of Asia, unlike sub-Saharan Africa, malaria is common and severe across all age groups. A study on the Thai-Myanmar border revealed a mortality rate in schoolchildren of 3 per 1000 children, and that 27% of malaria deaths occurred in schoolchildren and in Vietnam, prevalence surveys indicate that schoolchildren are more exposed to malaria than younger children and represent an important proportion of malaria cases. [2] [3]

Interventions of proven effectiveness are going underutilized

Unlike a number of public health challenges facing the world today, interventions of proven effectiveness against malaria, such as insecticide-treated nets (ITNs) and pharmaceuticals exist and can be made affordable, but are often dramatically underutilized, resulting in avoidable morbidity and mortality from the disease. Simple messages that teachers could relay to their students - encouraging them (especially the younger ones) to sleep under an ITN, advising that pregnant females seek intermittent presumptive treatment and sleep under a net, recognition of danger signs of severe malaria, and advising all students of the importance of promptly starting and following-through with the full course of treatment – could result in improved take-up of existing available interventions to stem the tide of malaria. Skills-based health education can give all children the ability to recognize the signs and symptoms of malaria, and the need to seek timely and effective treatment for it.

Communications for behavior change is an increasingly important activity for RBM partners, and messages delivered through school-health programs provide an important avenue through which this behavior change can be affected. In Africa, for instance, the individuals and communities are being given increased responsibility for prevention and treatment of malaria. Insecticide treated nets, for instance, have been proven to reduce child deaths by as much as one-fifth in sub-Saharan Africa, yet the success of the intervention depends on proper use by families and individuals. Similarly, the vast majority of those infected with malaria have no contact with the formal health sector, rather, they go either untreated or treated at home and obtain drugs through private sector channels. The relative independence of the malaria patient, therefore, demands improved understanding of appropriate prevention and treatment in order to decrease morbidity and mortality from the disease. Finally, children can be important agents for change. Health education through schools can help promote a community wide understanding of malaria and the need for control and can create a demand for health services (both private and public) to provide access to affordable and appropriate treatment.

Schools need improved guidance and resources to address malaria

Recent studies have suggested that teachers recognize the need to discuss malaria with their students but oftentimes lack the information to do so (ref). Schools and teachers have the potential to play an important role in malaria control but schools have been underutilized as a point of contact with children and their families in malaria control.

Education sector activities to promote malaria-control through prevention and treatment require an effective partnership with the health sector to achieve full impact. It is the health sector which retains overall responsibility for malaria control, and for the technical content of all advice and actions through schools. There is a particular need for consistent drug policies that promote universal access to affordable and appropriate treatment. A policy that was able to promote a single, readily recognizable "malaria treatment" that was readily available from multiple sources would greatly simplify the task of promoting prompt and effective presumptive treatment

What are some options to address malaria in schools?[4]

- *The delivery to school-children of simple messages about malaria prevention and treatment, as well as the promotion of general primary health care activities, through skills-based health education.*
- *The use of schools as community focus points for treatment of insecticide treated materials.*
- *Training of teachers to recognize malaria and the appropriate actions required to treat it. In particular, for teachers to recognize severe malaria and be able to rapidly refer children to health facilities.*
- *Evolving roles, understanding, collaboration, and policy dialogue between schools and health facilities, supported by the ministries of Health and Education.*

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[1] Roll Back Malaria. (2001). www.rbm.who.int

[2] Luxemburger *et al.* (1996). The epidemiology of malaria in a Karen population on the western border of Thailand. *TRSTM&H* 90, 105-111.

[3] Luxemburger *et al.* (1997). The epidemiology of severe malaria in an area of low transmission on the western border of Thailand. *RSTM&H* 91, 256-262.

[4] Some adapted from Report prepared by P. Wenzel Geissler, Lotte Meinert (both Institute of Anthropology, University of Copenhagen), Simon Brooker (London School of Hygiene and Tropical Medicine) and Kiambo Njagi (Division of Vector Borne Diseases, MoH, Nairobi). School Children, Medicines, and Malaria. Draft for review.