

disease & disability

research findings for development policymakers and practitioners

Worm control for school children in Burkina Faso

A national campaign in Burkina Faso aims to treat all school-age children for schistosomiasis (bilharzia) and soil-transmitted helminthiasis (intestinal worms). How effective is this approach? A combined school- and community-based strategy can produce high coverage, but sustainability is a challenge for the future.

Schistosomiasis is widespread across Burkina Faso. Following World Health Organization recommendations, the Ministry of Health, supported by the Bill and Melinda Gates Foundation through the Schistosomiasis Control Initiative, offers all children free praziquantel treatment. Albendazole is also included to address areas with soil-transmitted helminthiasis.

Looking at the successes and costs of the campaign, research led by Imperial College London in the UK found that:

- 3,322,564 children received treatment during the first phase of the campaign: 90.8 percent of the estimated school-age population.

- Almost 40 percent received treatment from their school teachers. The remaining 60 percent who did not attend school were reached by community drug distributors.
- Treatment costs per child treated were US\$0.098 (US\$0.084 through schools and US\$0.107 in the community). Total costs per child, including drugs, were US\$0.32 (US\$0.308 through schools and US\$0.33 in the community).

The study shows that drug distribution through schools and in the community can achieve higher coverage rates among school-age children in countries where school enrolment is low, and the number or size of primary schools is too small to justify solely school-based distribution. The researchers recommend using both channels to reach the maximum number of children at the lowest cost.

Decentralised decision-making aided the campaign's success. Only 22.8 percent of the non-drug budget was spent at the national coordination level, while 69.6 percent was allocated to the two most decentralised levels (district and dispensaries), who controlled their own funds.

Control of schistosomiasis in Burkina Faso will need ongoing financial support due to wide geographical spread and high rates of transmission. However, positive signs for

future sustainability of these disease control activities include the following:

- The treatment campaign was implemented by national staff using local expertise and existing infrastructure. There was huge support from government staff and community members in terms of commitment, dedication and social mobilisation.
- The campaigns have made communities more aware of how to control diseases.
- Re-treating children should cost less as only refresher training and top-up equipment will be needed.
- Drugs are the biggest cost. Regular praziquantel donation by manufacturers to endemic countries would greatly boost sustainability.
- Full sustainability requires integration of regular parasite treatment into routine healthcare services.

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'A Combined School- and Community-based Campaign Targeting all School-age Children of Burkina Faso against Schistosomiasis and Soil-Transmitted Helminthiasis, *Acta Tropica*, 99, pages 234-242, by Albis-Francesco Gabrielli, et al, 2006

Washing hands with soap in Ghana

Washing hands with soap is a simple and effective way to prevent the spread of many infectious diseases. Yet globally, hand-washing rates are low. What factors affect hand-washing behaviour in Ghana and what could motivate hygiene behaviour change?

One of the main Millennium Development Goals is to achieve a two-thirds drop in mortality rates in children under five years old by 2015. Each year over two million children die globally from diarrhoeal diseases, and a further two million die from acute respiratory infections. Many of these infections could be prevented by hygienic hand washing.

Rates of hand washing with or without soap are universally low across Ghana. Ghanaians experience around nine million episodes of diarrhoea annually and about 84,000 children die from diarrhoea each year. Worldwide, rates of hand washing are unacceptably low, yet to date increasing knowledge through health education has

only had a limited impact on behaviour.

A study by the London School of Hygiene and Tropical Medicine in the UK proposes that consumer marketing, which aims to target the audiences' hopes, desires and motivations, may be a more effective approach than increasing knowledge via health education. The study used consumer research to identify what factors influence hand washing with soap. It found that:

- While hand washing with water is common, mothers do not habitually hand wash with soap. Only 3.5 percent wash their hands with soap after defecating and only 2.3 percent after wiping their child's bottom.
- Women's strongest motivations for washing their hands with soap are related to nurturing children, desire for social acceptance, and disgust for faeces and dirty latrines, particularly their smell.
- Almost every home has soap and water for bathing and laundry. Most public latrines, where 50 percent of the population defecate, do not have facilities for hand washing with soap.
- Feelings of disgust from contamination are particularly pronounced after using dirty public latrines.

Based on these findings, the study recommends the following:

- Establishing the use of soap as a normal part of the hand-washing routine is crucial. Doing so at life-change events such as giving birth may be the most successful approach, as people may be more open to behaviour change.
- Hand-washing facilities should be constructed outside public latrines. This might strengthen the social motivation as others will observe who does or does not use soap.
- The challenge for communications programmes is to make people feel disgusted or contaminated if they do not wash their hands with soap after handling faeces or before handling food.

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Widening the net Supplying insecticide-treated bed nets in Kenya

Insecticide-treated bed nets (ITN's) reduce malaria infection and save lives. In Africa, many people still do not use ITNs. Many projects have increased use but failed to establish sustainable distribution systems. Effective long-term mechanisms for providing nets and insecticides to the people who need them are required.

The African Medical and Research Foundation (AMREF) based in Kenya, reports on the impact of two distribution strategies. Both strategies, running over ten years, relied on organised community groups recruited by AMREF to manufacture, promote and re-treat ITNs. In one of the strategies, the employer-based approach, AMREF sold nets to employers who sold them on to their employees on credit, repaid in instalments. The other strategy used a community-based approach, in which AMREF sold nets to the organised community groups (OCGs), which sold them on directly to householders.

The evaluation study was carried out in four different sites in Kenya during the dry season, from October 2002 to March 2003. For each of the two approaches, one rural and one urban (or peri-urban)

site was selected. A random household interview survey was conducted, with focus group discussions and interviews with key informants. Findings included the following:

- Bed net coverage at three of the four sites was less than 50 percent, above which community wide protection is considered necessary.
- Less than one third of household members slept under a net the previous night, particularly in urban or hot areas where fans were preferred.
- Employer-based sites had higher coverage than community-based sites.
- The main reasons given for not owning ITNs at community-based sites, where most people were self-employed and reliant on seasonal activities, were lack of money or the high cost of buying and treating nets. The re-treatment of nets was not considered a priority.
- Some community members did not get information about the availability of ITNs through OCGs, particularly in more isolated areas.
- The overall rate of re-treatment was just 21.6 percent. Employer-based sites had better re-treatment rates because they encouraged employees to continue re-treatment. Many employees re-treated nets through the credit system.
- Factors related to low rates of re-treatment were lack of information, low availability of insecticides and lack of money.

The findings suggest a number of lessons for improving coverage:

- An employer-based approach offers a credit system making ITNs more affordable and encouraging re-treatment.
- An employer-based approach appears to have high potential for contributing to the expansion of ITN programmes, in urban and accessible rural areas. Delivery via employers and cooperative societies could reach a high proportion of the Kenyan population.
- In urban areas, where people express a preference for fans rather than nets, treated window curtains may be preferable.
- ITN manufacturers use established commercial distribution channels rather than rural retailers, so OCGs are important partners for ITN distribution in more remote rural areas. This role may change as commercial distributors become established in rural areas.

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Burdened by care HIV and AIDS in Namibia

Caring for someone with HIV and AIDS can impose a great strain on household resources. The impact on the household of a person with a protracted illness may be greater than that of the actual death of the ill person. How does the duty of daily, long-term care affect the physical and psychological well-being of patients and carers?

Research from the University of Sheffield in the UK used solicited diaries to discover the daily and long-term duties of caring for affected patients among households in the Caprivi region of Namibia.

Seven patients and carers were asked to keep a diary in which they recorded their experiences for between one and six months. Carers made regular home visits to help and monitor the diary process. All the participating patients were women living in female-headed households.

In the Caprivi region, levels of HIV and AIDS testing are low and patients often give alternative explanations of their symptoms. In none of the cases was it explicitly stated that AIDS was the cause of illness. However, the symptoms were consistent with AIDS-related illness and ill people felt that others saw AIDS as the cause of their symptoms. Findings include the following:

- The need to feed a family forced some carers to prioritise immediate household needs over caring.
- The physical health of the carer suffered when the patient was seriously ill, with

several reporting that they were unable to eat or ate only small amounts.

- Tensions arose when carers were unable to provide for patients as they would wish.
- Carers received less support when the patient did not improve, resulting in strain and isolation for the carer.
- Stigma associated with HIV and AIDS, and its unpredictable nature, can result in frustration and hostility towards the patient and unwillingness to support the carer.
- Patients suffered unavailability or denial of treatment, anxiety about their children's future and shame over their condition.

The findings indicate that HIV and AIDS can inflict considerable difficulties on poor households in the Caprivi region. The long-term nature of the illness puts strains on livelihood security and relationships at home. Policy lessons include:

- Increasing medicine provision will help reduce episodes of illness and long-term care but stigma and social restrictions will continue to constrain access and take up of treatment.
- Locally-appropriate initiatives are needed to decrease the burden of care and subsequent stigma and neglect of ill people.
- Provision of more sustained and effective home-based care support is vital for more vulnerable households.

- Support should include counselling services to address the psychological and emotional costs of HIV and AIDS, to encourage testing and to delay and manage the onset of AIDS-related illness.
- The expectation that the duty of care lies only with women must be challenged. Other household members must be involved to decrease burden of care and alleviate tensions within the household.

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Keywords: schistosomiasis, praziquantel, mass chemotherapy, HIV, AIDS, stigma, palliative care, hygiene, hand washing, disgust, health education, consumer marketing, latrines, malaria, insecticide-treated bed nets, commercial distribution, credit scheme