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In many of the zones where humanitarian response is needed, *plasmodium falciparum* – the deadly form of malaria – is a major cause of morbidity and mortality. Almost a third of the one million malaria deaths annually occur in emergency settings, among people made vulnerable by lack of food, shelter or adequate health care. Although the disease has been eradicated in the West, it still threatens 40% of the world's people, the vast majority of them in Sub-Saharan Africa. Africa is thought to lose as much as \$12 billion every year as a result of the costs associated with treatment and prevention, as well as lost productivity through illness or death. Meanwhile, the medicines traditionally used to treat the disease have become ineffective because of parasite resistance.

The presence of malaria in any given area of humanitarian operations has a profound impact on the affected community. It will also be a defining feature of the response. All humanitarian practitioners and policy-makers need to understand the nature of *plasmodium* and its vector, the *anopheles* mosquito. This issue of *Humanitarian Exchange* features articles from a selection of malaria experts, giving a detailed picture of the many technical, political and funding aspects of this global problem. It describes how, in response to increasing resistance to traditional drugs, new treatment protocols like artemisinin combination therapy (ACT) have been developed, and new techniques deployed to prevent

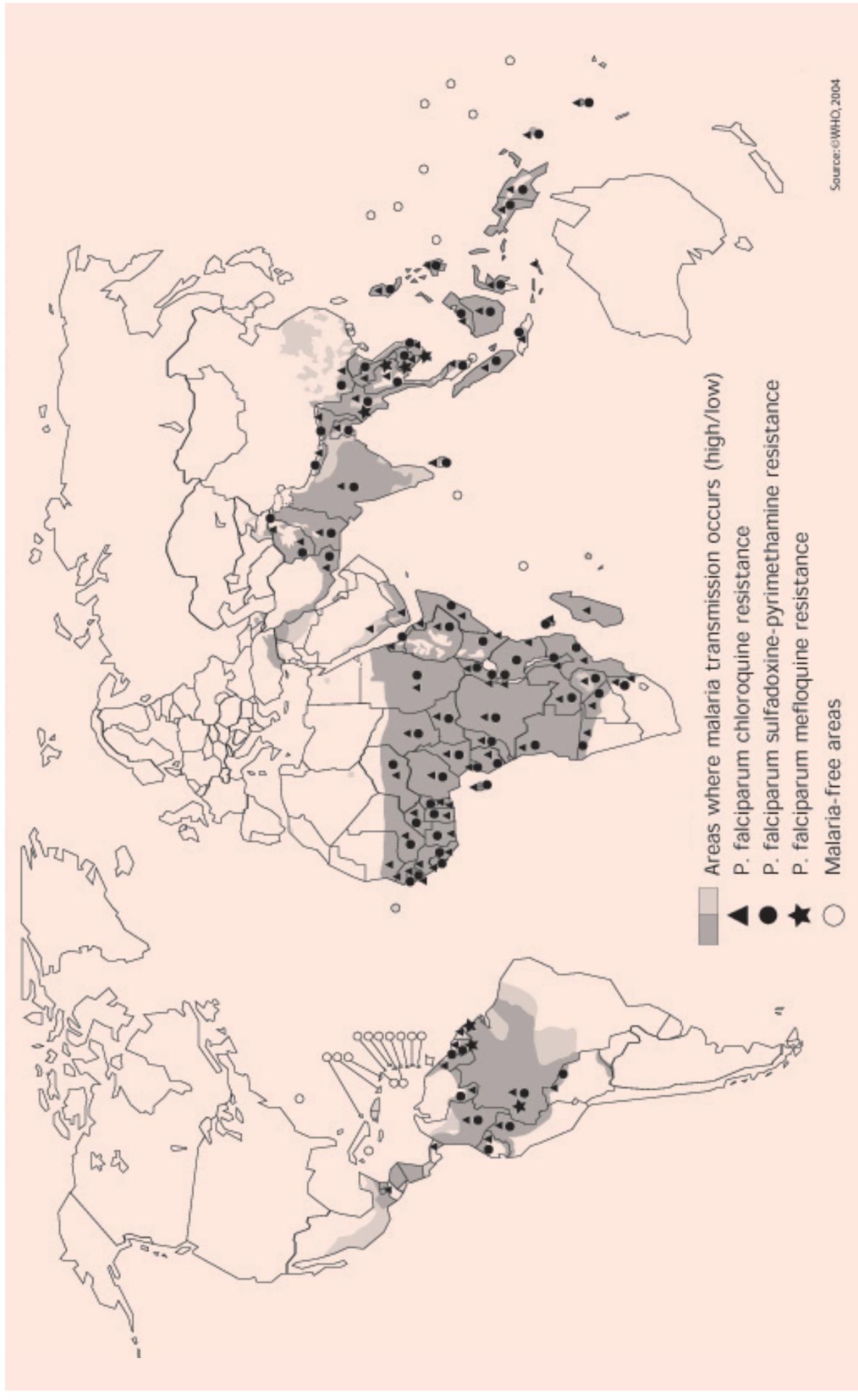


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the spread of malaria, such as insecticide-treated bed nets and impregnated plastic sheeting. Other articles explore the potential for forecasting malaria epidemics, the management of malaria in refugee camps and donor policies towards malaria treatment and prevention in emergencies, as well as the problematic response to the malaria epidemic in Ethiopia in 2003.

This edition of *Humanitarian Exchange* also offers a range of articles covering issues of more general concern to humanitarian practitioners and policy-makers. We look at another global health problem – HIV/AIDS – and its implications for the elderly; education in post-conflict settings, drawing on a pilot programme in Liberia; the gender impact of small arms violence in Burundi; the security issues for aid workers stemming from gun-related violence; weaknesses in the current response to internal displacement; and financial transparency and accountability in aid. We also report on the Tsunami Evaluation Coalition, an attempt to promote a sector-wide approach to evaluations of the Indian Ocean tsunami response, and to develop procedures to coordinate evaluations in the future. As always, we welcome your feedback and ideas for contributions.

Figure 1: Malaria transmission areas and reported *P.falciparum* resistance, 2004



THE GLOBAL MALARIA CRISIS

Breaking the cycle of malaria and death in emergencies: the way forward

Fatoumata Nafo-Traoré and David Nabarro, WHO

Malaria kills more than a million people each year. Nearly one out of every three of these deaths occurs in an emergency setting – within populations displaced by violence, struggling to get the food, water, shelter and security they need to live, and with unpredictable access to public health services. In these conditions, vulnerability to malaria increases because people are more likely to be bitten by mosquitoes, are often ill with other infections and lack access to health care. When a humanitarian crisis occurs in a malaria-prone area, malaria deaths may exceed those resulting from other more immediate causes – unless proper control measures are adopted.

The context

Malaria was endemic all over the world until just half a century ago. Although it has been eradicated in the industrialised countries of the northern hemisphere and Australia, it still threatens 40% of the world's people, mostly those living in the poorest countries. The toll of malaria began to worsen in the 1990s, when the medicines used to treat it lost their effectiveness because of parasite resistance.

It is estimated that there are between 350 and 500 million episodes of malarial illness across the world each year. Over 80% of malaria deaths occur in Sub-Saharan Africa, and most of these deaths are among infants or very young children. Malaria kills more African children under five than any other single infection, and is a major cause of low birth weight and anaemia. If children survive malaria, they may suffer from brain damage or paralysis. Pregnant women are also especially vulnerable.

there are between 350 and 500 million episodes of malarial illness across the world each year

Malaria keeps poor people poor. In Africa alone, the total economic burden of malaria is estimated at \$12 billion annually. Households threatened by malaria spend up to a quarter of their income on medical consultations, mosquito nets, medicines, laboratory tests and funerals for victims. They are less productive and lose income because of absences from work or inability to plant and harvest crops. Children lose out on educational opportunities. Malaria control has been identified as one of the four most cost-effective means

to fight poverty, and controlling malaria will make a vital contribution to fulfilling the Millennium Development Goals.

In poor countries, proper malaria control is a daunting task, even under stable conditions. The pattern of disease is affected by meteorological changes or environmental shifts: both can cause an upswing in malaria incidence, adding to the stress faced by health services. Rainfall and temperature-related epidemics in African highland areas, for example, may result in illness affecting up to 50% of the population. Local health services are overwhelmed. When millions of people are affected by such an epidemic, the result in suffering and death represents a humanitarian crisis in its own right. In Ethiopia, a malaria epidemic in 2003 is estimated to have affected 21.9 million people in 38 zones, resulting in (at a conservative estimate) 8.7 million cases, with 263,000 deaths (see pp. 25–28 of this issue).¹

Complex emergencies created by war or civil unrest undermine efforts to improve malaria control. In 1984, when Burundi was politically stable, the number of malaria cases each year was 200,000. In 2000, following a period of internal violence and instability, reported annual malaria cases in Burundi were over 3 million.² In the late 1970s, the authorities in Afghanistan reported around 300,000 malaria cases annually. By the 1990s, this had risen to 2–3 million cases a year – one of the highest malaria burdens outside Africa.³ Twenty per cent of confirmed cases in Afghanistan are falciparum malaria (the lethal form of the disease), and falciparum malaria has crossed the northern border into Tajikistan.⁴ A survey by the International Rescue Committee in the eastern Democratic Republic of Congo (DRC) during 2000 showed that, during a period when violent deaths increased over five-fold, malaria-specific mortality more than tripled.⁵

¹ J. O. Guintran, *Report of Evidence and Experiences from Ethiopia, with a Focus on Surveillance and Rapid Assessments*, working paper for the 'WHO Consultation on best practices and lessons learned from implementing malaria control in complex emergencies in Africa 2000–2004'.

² *World Malaria Report 2005*, p. 275.

³ *Weekly Epidemiological Record*, no. 37, 12 September 1997, www.who.int/docstore/wer/pdf/1997/wer7237.pdf.

⁴ The Global Fund to Fight AIDS, Tuberculosis and Malaria, Fourth Call for Proposals, Geneva, 10 January 2004, www.theglobalfund.org/search/docs/4AFGT_764_0_full.pdf.

⁵ IRC, *Mortality Study, Eastern DR Congo (April-May 2000)*, www.theirc.org/index.cfm?section=what&wwwID=441&topicID=86&ppID=441.

Treatment strategies

In response to the growing crisis, several new initiatives have been launched to reduce the burden of the disease. One – Roll Back Malaria (RBM) – was started by the World Health Organisation (WHO) in 1998. It now functions as a global partnership, committed to halving the burden of malaria by 2010. WHO provides technical support to RBM partners.

The importance of tackling malaria in emergencies has also come more sharply into focus, and over the past five years strategies for controlling malaria in emergencies have been refined. There is a clearer understanding of how tasks should be allocated between different partners. A Malaria in Emergencies Network, facilitated by WHO and open to all major partners and implementing agencies, holds regular teleconferences for strategic planning, and operates an email listserv that ensures that vital information can be shared with all concerned whenever an emergency strikes.

proper malaria control is a daunting task, even under stable conditions

WHO's fundamental strategies for addressing falciparum malaria in emergencies are:

- Provide universal access to prompt diagnosis and treatment with artemisinin-based combination therapy (ACT), the most effective antimalarial medicines available today (see pp. 5–8 of this issue).
- Organise outreach services for isolated populations and vulnerable groups. Emergency personnel must get good, routine intelligence about the status of all populations affected by the emergency, and seek out those who are ill, going out on the equivalent of hospital rounds.
- Set up a surveillance/early-warning system to detect outbreaks of malaria and other important causes of disease at the earliest possible stage.
- Preparedness: have trained personnel and supplies readily available.
- Respond swiftly to intelligence about any potential malaria outbreak (clustering of severe malaria cases and deaths, or a sharp rise in reported fever cases) by investigating extents and possible causes, and intervene rapidly if an epidemic is confirmed.
- Engage in community prevention campaigns through distribution of insecticide-treated mosquito nets (ITNs: see pp. 11–13 of this issue) and education about how to use them, or indoor residual spraying (IRS) with insecticides once local conditions permit high population coverage (80% for ITN, and above 85% for IRS).
- Ensure that health services and all the measures needed to save lives are provided free of charge to the user, for as long as the emergency conditions last.

National and international humanitarian organisations, national authorities and community groups understand the extraordinary burden imposed by malaria during crises. To break the cycle of malaria infection, sickness and death they need funds, supplies and expertise. The financial position has improved in recovering situations as money has become available through the Global Fund to Fight TB, AIDS and Malaria (GFTAM), a partnership between governments, civil society, the private sector and affected communities. The Fund was created to increase resources to fight three of the world's most devastating diseases, and to direct those resources to areas of greatest need. A total of \$133 million has been pledged to Angola, Burundi, the Central African Republic, the DRC, Haiti, Liberia, Somalia and Sudan, of which almost \$53 million has been disbursed. However, programme management is a difficulty, and crisis-affected countries will face challenges in absorbing funds allocated to them.

Impacts

The impact of the new strategies is not yet established. However, evidence from disease surveillance programmes suggests that their consistent application will substantially reduce malaria deaths. There are suggestions that this was the case during the recent crisis in Darfur. During 2004, local authorities, NGOs and UN agencies undertook malaria control activities with a view to reducing the malaria risks experienced by displaced people in Darfur. These measures included:

- spraying of all temporary shelters in the major camps with residual insecticide (reaching at least 85% coverage, the threshold for community-wide protection);
- implementation of an agreed strategy for providing insecticide-treated mosquito nets;
- routine home visits in the camps to detect people with febrile illnesses, and treat them;
- widespread use of rapid diagnostic tests;
- fast-track adoption of the government's new policy for malaria treatment with ACT; and
- weekly surveillance, relying on an agreed set of indicators, for correct reporting of malaria cases and providing feedback – including warnings about sudden upsurges – to all partners.

The rains in Darfur in 2004 were lighter than normal, and this helped reduce the risk of widespread epidemic malaria during the crisis. Malaria control measures in camps and villages prevented the clustering of severe malaria cases and deaths. The death rate from malaria (the case fatality rate), measured at health facilities, was low (0.2%), implying that those who did seek help received prompt and effective care.

The Darfur results imply that, even in adverse conditions, and where humanitarian access is constrained, effective malaria control measures can be implemented provided that field-based agencies work together effectively, under the leadership of a competent authority (in this case WHO, together with the national malaria control programme).

even in adverse conditions, and where humanitarian access is constrained, effective malaria control measures can be implemented

Malaria control proposals should be supported only if they reflect evidence-based strategies. Plans for malaria control in rapidly changing contexts, such as crises and complex emergencies, should include regular reviews of activities, either implemented or planned. This should increase the likelihood that control strategies match needs, and are not made unduly rigid by funding agreements.

In complex emergencies, where data on the parasite susceptibility to different treatment regimes are rarely available, ACT is the treatment of choice, and in each crisis a standard policy of ACT-based medication is essential. The Darfur experience showed the feasibility of using

ACT for the treatment of falciparum malaria in a crisis setting, and the importance of providing this therapy free of charge to those who need it. Several studies have shown that cost-sharing discourages people in crises from seeking care. Work by Médecins sans Frontières during the Burundi crisis in 2003 and 2004 showed an association between the cost to patients for malaria treatment and the number of deaths due to malaria. A three- to five-fold increase in fees was associated with a doubling of fatalities attributed to malaria.

Coordinated and well-financed action results in effective malaria control and reductions in malaria deaths in humanitarian crises and emergencies. Both national and international bodies with the expertise to provide strategic coordination for malaria control need consistent financial backing so that they can deploy experienced people to settings characterised by crisis and emergency.

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Malaria in emergencies: treatment, diagnosis and vulnerable groups

Christa Hook, MSF

The nature of humanitarian crises, and the parts of the world in which they frequently occur, make the management of malaria of critical and urgent importance, and systems for malaria disease management must be set up as a priority in humanitarian emergencies in malaria-endemic regions. A frequent cause of tension in an emergency can be the difference between the needs of malaria control presented by that emergency, and the needs being addressed by national malaria control mechanisms in the affected country. In a stable situation, health workers may have been trained to use clinical algorithms adapted to the level of malaria transmission and partial immunity in their particular region. For many reasons, drug policy may not yet have moved away from older drugs; the drugs needed for the emergency may not be registered for use in the country, and may be unfamiliar to the people being treated, and to the health workers treating them.

In a crisis situation, the medicine given for malaria must be as near to 100% efficacious as possible. For many reasons, it is likely that, for this episode of illness, there will be one contact, and one only, with the health services. If malaria is



The malaria mosquito Anopheles gambiae

only partially treated at the first contact, it is likely to recur in a more severe form, requiring more complex treatment, and probably at some distance away.

Older drugs no longer work

The parasite that causes the lethal form of malaria, *Plasmodium falciparum*, has developed resistance to chloroquine, sulphadoxine-pyrimethamine (Fansidar) and

amodiaquine, the standard first- and second-line drugs. This resistance has spread very rapidly, but evenly, through almost all areas where malaria is transmitted. Resistance is caused by random mutations in the parasite. When the right combination of mutations occurs, that parasite is able to survive in the presence of an antimalarial drug. Meanwhile, all the susceptible parasites are killed, favouring the survival of the resistant parasite, which then goes on to multiply, infect the mosquito and get passed on to another person. Factors favouring the development of resistance include any situation in which parasites are exposed to a low level of antimalarial drug, for instance where a full course of treatment is not completed, where poor-quality drugs with inadequate active ingredient are used, or where long-acting drugs are administered, which are eliminated slowly from the body. Resistance develops more easily when drugs are used singly, rather than in combination.

In many places, resistance is now over 50%, and as much as 70%, which means that fewer than half the people ill with malaria will fully recover. Resistance is not always obvious either to the patient or to the health worker, as there may be a partial response, and because chloroquine has an antipyretic effect, bringing down a patient's temperature even when the parasites are not destroyed. The initial apparent response will be followed by a recurrence of disease, which may become severe with a high risk of death, or by persistence of the parasite, leading to increasingly severe and life-threatening anaemia.

the only reliably effective antimalarial drugs are artemisinin-based combination treatments

Treatment

Currently, the only reliably effective antimalarial drugs are artemisinin-based combination treatments (ACTs). ACTs treat malaria using a combination of two drugs, one of which must be a derivative of artemisinin – the most effective anti-malarial ever discovered. It acts very quickly, and has negligible adverse effects. The most widely used derivatives are artesunate and artemether. For use as a first-line drug for uncomplicated malaria, one of these two has to be combined with another longer-acting antimalarial, one known to have low resistance in the geographical region in question. Only four ACTs are currently in use, although more are in development:

1. Artesunate plus sulphadoxine/pyrimethamine (SP). This has limited utility because of the high level of resistance to SP in most countries. But in places where resistance to SP is low, such as Afghanistan and north Sudan, this combination is easy to administer and relatively cheap.
2. Artesunate plus amodiaquine (AQ). In many countries resistance to AQ is low, mainly because it has not been used a great deal in monotherapy (single drug admin-

istration). There can be cross-resistance with chloroquine, although this is variable and cannot be assumed. This combination is available in blister packs, offering improved adherence over the use of separate pills; it will be available in co-formulation (both drugs made into one pill) in 2006.

3. Artesunate plus mefloquine has been used for some years in South-East Asia, with very good outcomes, including falling death rates and reduced transmission. It has not yet been used in programmes in Africa.
4. Artemether plus lumefantrine (AL) Coartem. Since lumefantrine has never been used as a single drug against malaria, this combination has no recorded resistance (except very recently in Cambodia), and is therefore the drug of choice where resistance is not known, especially in emergencies. It is only available co-formulated, an advantage in delaying resistance, but it has to be taken twice a day, instead of the once-daily dosage of the other combinations. It is only properly absorbed if taken with fatty food. Because it is almost wholly efficacious, it is replacing chloroquine and SP in the new Interagency Emergency Health Kit.

There are few absolute contra-indications to the use of these drugs. Most restrictions stem from a lack of evidence, rather than known problems. However, artemisinins should not be used in the first trimester of pregnancy. In the second and third trimesters, women who are sick with malaria must have effective treatment. Any ACT known to be effective can be used, since adherence to the only alternative, quinine, is notoriously bad. AL is not yet licensed for children weighing under 5kg, but the other combinations can be used in very young children. Full details of drug dosages are in the new WHO *Treatment Guidelines* (2005) and in the *Interagency Handbook on Malaria Control in Complex Emergencies* (2005).

At the time of writing there is a shortage of ACTs, in particular of artemether-lumefantrine. But even when the supply was more or less keeping up with demand, availability in an emergency was often a significant problem due to cumbersome supply mechanisms. The shortage is now being addressed by increased production of Coartem, and by the development of a generic version. Meanwhile, other ACTs are more readily available and can be used where resistance to the companion drug is known to be low. Production of the raw material is also being stepped up, but because the drug is plant-based, the time from sowing the seed to having pills on the market is determined by the time it takes for the plant to grow. Shortages have come about not because there is an inherent difficulty in growing the plant and extracting the active ingredient, but because national and international agencies delayed making funding available up-front, and in placing firm orders in time to meet predicted and anticipated needs. This is a man-made problem, to which there are man-made solutions.

Diagnosis

Malaria can look like other diseases, and other diseases can masquerade as malaria. Many studies have shown that

even the best and most experienced clinicians cannot identify malaria purely by clinical history and physical examination. This is a particular problem in a crisis; health workers and patients may be used to considering every fever as malaria, or may never have encountered malaria before, and may be unaware of the potentially disastrous nature of a fever. The identification of other infectious diseases, such as Kala Azar or Viral Haemorrhagic Fever, has been delayed because fevers have initially been treated as malaria.

It is therefore of critical importance to use biological tests, either microscopy or rapid tests, to ascertain the level of malaria in the community at risk, and to confirm suspected malaria in individuals. It is unusual in an emergency to have adequate numbers of trained microscopists, and it is likely that rapid tests will be more appropriate in the initial stages. Health workers quickly learn the technique, and how to interpret these tests.

malaria can look like other diseases, and other diseases can masquerade as malaria

Rapid tests detect antigens from the parasite itself. They come as strips or cassettes, labelled with an antibody, to which a drop of the patient's blood is added, along with a buffer solution. The test is usually read within 15 minutes. The tests most commonly used detect an antigen from *plasmodium falciparum* only. Other species are not detected. These HRP II tests are the most sensitive and robust. Many tests are available, with very variable performance. A list is available on the WHO website, but with no indication of quality – only a list of names. MSF and Epicentre (a sister organisation of MSF working in epidemiology and operational research) have verified the sensitivity and specificity of some of the HRP II tests. Other antigens and enzymes are used in different types of tests, but to date these are not sensitive enough for use in an emergency.

In some crisis situations, patient numbers can be very high, and even a 15-minute test can be difficult. It is therefore critically important to ascertain very early on what the level of malaria really is in the population, through a survey in the community or in the clinic. It is always good medical practice to confirm a suspect diagnosis in every patient, but if this is not possible, and it has been ascertained that a very high percentage of young children under five years with suspected malaria do indeed have parasites, then it is reasonable on clinical grounds to treat all such children. However, because things can change quickly in an acute crisis, it is always important to continue to monitor the situation by confirming the diagnosis in a sample of the patients on a regular basis. Another important benefit of confirming malaria is that ACTs are in short supply and are expensive, so should be given for malaria only, and not for every fever.

Vulnerable groups

Young children are always at higher risk from malaria as they have not yet developed even partial immunity, but the risks for a malnourished child are greater. In the first place, severe malnutrition masks the signs of malaria, so an unwary clinician may be falsely reassured by the lack of fever or other signs of malaria. Until recently, it was accepted practice to give presumptive treatment with chloroquine or SP to all children on admission to a therapeutic feeding programme. With new drugs and diagnostic possibilities, this is no longer acceptable. Rapid tests are not dependent on the immune reaction of the patient, so they are reliable in severely malnourished children. Best practice now is to test all children on admission, and to treat all positives with ACT.

In pregnancy, women lose any immunity to malaria that they built up during childhood. This is particularly the case in first and second pregnancies, but continues into later pregnancies in women who are HIV positive. The malaria parasite favours the placenta, causing increased anaemia, low birth weight and the risk of premature labour. In high transmission areas it does not necessarily cause any acute illness in the woman, so it is important to use every opportunity to identify pregnant women, test them for malaria parasites and treat with ACT if positive. Later, when the crisis has stabilised, intermittent presumptive treatment with SP may be appropriate in antenatal services.

Prospects for the future

All international bodies supporting and funding malaria interventions in emergencies accept that ACTs alone are effective enough for these critical situations. Many countries also want to switch to ACTs. Problems arise in the slow pace at which this change is being made, exacerbated by shortages of these drugs. These shortages are being addressed, albeit too late for some people suffering and dying from malaria. But for these new drugs to be used properly, health professionals need training, preferably before the crisis arises. It is of great concern that many international NGOs involved in health care are not well versed in how to use ACTs, or in the need for confirmation of diagnosis. It also seems to be the case that doctors and nurses being trained in tropical health are still not knowledgeable or confident enough to put these approaches into practice when faced with a humanitarian crisis. This must be urgently addressed. Meanwhile, the even-greater task of disseminating this knowledge and training within endemic countries, especially those affected by emergencies, must be tackled and supported by donors.

In future humanitarian crises in a malaria-affected country, we need to know that there is information about drug resistance, that the drugs needed are registered and can be imported quickly, that national and international health workers understand how to use diagnostic methods and can interpret the results, and that they are prepared to implement up-to-date management of malaria from the very beginning. We also need to step up the production of these life-saving drugs and set up

mechanisms to ensure their availability in an emergency. Only then will this eminently treatable disease stop exacting such a huge death toll in emergencies.

Dr Christa Hook has worked for MSF and other NGOs since 1992. She was recently coordinator of MSF's international malaria working group, and malaria adviser to the Manson Unit in MSF UK.

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ACT implementation in a humanitarian emergency: an overview and a case study from the field

Manica Balasegaram, MSF

In the context of a major humanitarian emergency, malaria constitutes a major public health issue, contributing to significant morbidity and mortality. The complex nature of an emergency means that many issues – such as population displacement, the breakdown of health services, lack of housing, clean water and sanitation – are liable to cause high levels of malaria, or to trigger an outright epidemic. This is particularly the case in Sub-Saharan Africa, where limited resources are available to deal with the problem, even in non-emergency settings. At the same time, it has become increasingly clear that older drug regimens are failing to treat malaria effectively. In response, there has been a gradual shift in favour of more effective protocols. This means that, in many emergencies, health workers responding to malaria are having to work in an environment of evolving treatment policy.

Artemisinin-based Combination Therapy (or ACT) is now the first-line malaria treatment recommended by the WHO. This combination involves the use of an artemisinin – a 'new' malaria drug that is in fact a chemical extract of the artemesia plant that has been used in Chinese traditional medicine for at least 2,000 years – plus a companion drug such as amodiaquine, sulphadoxine-pyremethamine or lumefantrine (CoArtem). It allows for short and fast-acting treatment, as well as delaying the development of the parasite resistance that has rendered the previous first-line drug, choloquine, ineffective in most parts of the world for the treatment of falciparum malaria. ACT is an integral, but not exclusive, part of a strategy to control malaria. Other components, such as prevention (for instance through the use of bed nets) and vector control (such as indoor residual spraying of an insecticide) also have a place, especially in

emergencies. However, the focus of this article is on how ACT can be successfully implemented in a humanitarian emergency.

General points

In order to implement ACT at field level, it is important to deal with several hurdles that may impede progress. These can be present at several levels, and so often require a coordinated and collaborative approach.

At the international level, the international community must recognise the importance of malaria in emergencies. Resources need to be made available and allocated for ACT implementation. This means identifying the relevant drug to use, and procuring sufficient quantities of it within a suitable timeframe. At national level, protocols may not include ACT-based drugs, so getting permission to use these may therefore require advocacy and lobbying. There may also be administrative and bureaucratic hurdles to cross in importing a drug. Logistical capacity is also needed to import and distribute the drug. Finally, at the local level conflict and displacement may make access to health care and the running of health services difficult, while broader public health issues like widespread malnutrition may

ACT is an integral, but not exclusive, part of a strategy to control malaria; other components also have a place

require alterations in the approach to implementing ACT. Local partners, such as local health authorities and health workers, may be unfamiliar with recent protocol changes at national level, and there may be technical issues around implementation, such as insufficient human resources, inaccurate diagnosis and prescription, and the need to improve adherence to treatment and data collection for monitoring the use of the new treatment.

These problems will need to be addressed concurrently, and in collaboration with national and local authorities, international agencies and NGOs. A step-by-step approach may frequently be too slow to ensure successful implementation in an emergency. This implies that individual NGOs may need to work together, or with UN agencies. Some of these problems may be beyond the capability or mandate of individual actors or NGOs to resolve, and may require a broader political solution.

Technical implementation in the field

The approach to technical implementation in the field will depend on the specific constraints each context presents. Every emergency will be different, in terms of the capacity of health facilities, the human resources that are available, communication and transport links, security and the ability of the population to access health care. Nonetheless, several general points can be made.

First, a clear and sensible diagnosis and treatment protocol is needed. This should ideally follow the national protocol, but may be adapted after agreement with the ministry of health. The priority is to ensure that an efficacious and effective ACT is used as the first-line drug. Where resistance patterns are unknown, or where the national protocol is not yet an ACT, Artemether-Lumefantrine (e.g. CoArtem) is recommended.

Second, the protocol should use sensible case definitions; these can be as simple as considering all patients with a fever in the last 48 hours. This diagnosis should be confirmed through the use of rapid diagnostic tests (RDTs) or microscopy as clinical diagnosis alone can be unreliable and can result in poor estimates of the true disease burden, and inappropriate and ineffective treatment of patients. RDTs are easy to use and, unlike microscopy, can be employed in the most basic health structure. Hence, a combination of having a working case definition backed up by an RDT can prove useful in providing a more sensitive and



Testing for malaria in Kigova, Burundi, July 2002

specific diagnosis, as well increasing the confidence of health workers in the field.

Third, training is essential when introducing the new ACT (and diagnostic test) in the field, to ensure that health workers are confident in using the new tools they are given. Often, there is a temptation to treat *all* cases of fever as malaria, and so a list of and refresher on differential diagnosis can also help the health worker to be more discerning.

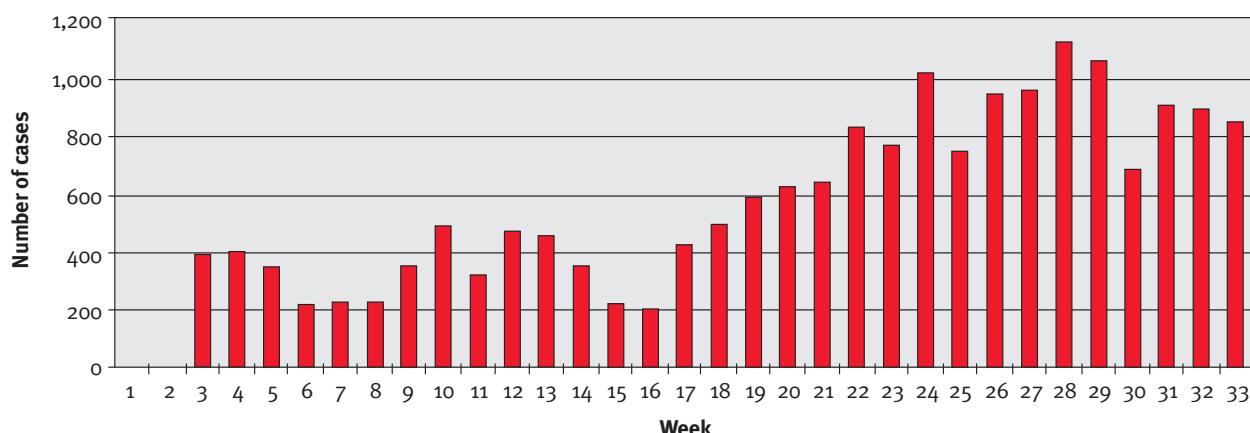
Data collection is useful primarily for disease surveillance, but can also be used to monitor and evaluate ACT implementation. Furthermore, it will allow for accurate estimates of future needs of drugs and other items. An easy and standardised format, which also covers other key

morbidities, should be put in place as early as possible. These often exist at ministry of health level. At health post level, individual health workers often collect very good information; the challenge is to standardise and collect these forms on a regular basis. Many health posts in rural and isolated areas may not be able to send or receive information on a regular basis.

it is not sufficient simply to distribute tablets to health centres and hope for the best

Attention also needs to be given to ensuring that patients adhere to treatment through health education, the training of health staff and the use of blister packets of ACT. Young mothers of infants should be targeted as a priority. Children under five are especially vulnerable to malaria, and it can also be difficult to administer oral medication to this group. While it is difficult to invest time in these areas in a busy health post, ignoring them will not improve adherence, and may significantly reduce the effectiveness and hence the impact of the ACT. It is not sufficient simply to distribute tablets to centres and hope for the best. This is especially the case if the health worker is using new or unfamiliar treatments and protocols.

Even if many national protocols have changed to an ACT, this change has often not filtered down to the rural health post. A clear strategy needs to be pursued; relevant actors need to be involved to ensure good coverage; a sufficient

Figure 1: Number of malaria cases per week (beginning January 2004)

and regular supply of drugs and diagnostic tools should be established; training needs to be undertaken; and a workable monitoring system should be put in place. These steps should all be part of a broader malaria surveillance and control strategy. NGOs can often play a key role in addressing these issues in the emergency context.

Lira, Uganda: a case study from Médecins Sans Frontières

Since 1986, the rebel group the Lord's Resistance Army (LRA) has been mounting attacks on government and civilian targets in Uganda. The attacks, often initiated from bases in southern Sudan, have led to significant death and displacement in the districts of Gulu, Kitgum, Lira, Pader and Apac. Violent incidents and attacks intensified in northern and central Uganda in 2003. In Lira district alone, an estimated 400,000 people were internally displaced by January 2004. An initial survey done by MSF showed that mortality rates in Lira were exceeding emergency thresholds, with around half of these deaths due to violence.

By the end of 2003, MSF had set up an emergency intervention programme based in Lira, with outreach in surrounding camps. The primary focus of the programme was nutrition and basic health care. From the initial assessment, it was clear that malaria was a significant cause of morbidity in the area. At this time, chloroquine (CQ) and sulphadoxine-pyremethamine (SP) were the first line drugs in the national malaria protocol. Given the nature of the emergency and known levels of resistance to CQ and SP, MSF decided to use an ACT. After discussion with national and local authorities, a combination of artesunate (AS) and amodiaquine (AQ) was selected. These drugs were easy to procure, and large quantities could be imported at relatively short notice.

A methodical approach to implementation was followed. A protocol was devised using a rapid diagnostic test (Paracheck) to confirm diagnosis. Training and implementation started first in the Lira therapeutic feeding centre (TFC) and hospital, and then in peripheral clinics. A monitoring system was put in place over the first few weeks of the programme.

Lira malaria protocol

Treatment protocol 1st line: AS & AQ
 2nd line: Quinine (for treatment failures and pregnant women)
 Complicated cases: Artemether intramuscular & AQ (oral) once patient can swallow
 Case definition (new case): history of fever or presence of fever
 Confirmation of diagnosis: Paracheck RDT
 Case definition (treatment failure): return with symptoms within two weeks of diagnosis

Data from the first six months of the programme (Figure 1) revealed that malaria proved to be a far higher cause of morbidity than expected. In the first 33 weeks of the programme, 18,000 cases were treated, of which 80% were in the under-five age group. This was unsurprising, as MSF had chosen as its target population children and pregnant women. Malaria accounted for over 40% of all consultations at the health post level, and 50% of all RDTs done were positive for malaria. Documented cases of malaria increased as the provision of health care expanded to IDP camps around Lira.

Probable adherence to treatment was surveyed, and estimated to be around 78%, showing that further training and education were required. Retreatment of malaria cases remained low at 1%, possibly implying that initial diagnosis and treatment of fever cases were effective.

It soon became clear in Lira that malaria was a significant contributor to the development of malnutrition. Therefore, a greater emphasis was placed on detecting cases of malaria in the health posts, and particularly in the nutrition centres. This included a medical consultation and testing for malaria in all children with moderate malnutrition – in effect ‘medicalising’ the supplementary feeding programmes. Furthermore, the value of using effective diagnosis and treatment (RDTs and ACT) algorithms was

made clear through training, which helped to improve staff knowledge and quality of care. It was also shown to be feasible in the context and scale of the humanitarian emergency in Lira.

Conclusions

Malaria is a very important cause of disease and death in humanitarian emergencies, and surveillance and control of malaria and other diseases form a key part of any humanitarian intervention. The use of effective diagnostic and therapeutic tools is essential. ACT is the recommended

treatment for malaria, particularly in emergencies. Implementation of ACT should be undertaken in the most responsible and methodical fashion possible, and should be a priority health intervention in malaria-endemic and epidemic-prone areas.

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Insecticide-treated nets: efficacy, impact and operational constraints

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Insecticide-treated nets (ITNs) have long been used against mosquito bites, and have been shown to give substantial protection against malaria. This article explores some of the operational issues around the use of ITNs in emergencies. How effective are ITNs in tackling the transmission of malaria? What advantages do treated nets have over untreated ones? What operational constraints exist to the use of ITNs in emergencies? What are the key issues in implementation?

Efficacy

The efficacy of measures to prevent mosquitoes from biting humans, and so infecting people with the malaria parasite, depends on the habits of the mosquitoes and their relationship to the habits of people. In Africa, all significant vectors (mosquitoes that transmit malaria) bite at night and in the early hours of the morning, and so are susceptible to ITNs. Studies in Sub-Saharan Africa have shown that insecticide-treated nets significantly reduce the risk of morbidity and mortality in childhood.

ITNs have been thought of mainly as personal protection, but there is increasing evidence that high coverage of ITNs within a community will reduce transmission because of the mass effect on vector survival. For nets to be maximally effective coverage must be high, nets should be re-treated promptly (or long-lasting nets used) and individuals should properly deploy their nets each night. The more households within a given area that have ITNs, the greater the benefit to neighbouring households without nets, although there is still little experience of using ITNs in this way in complex emergencies.

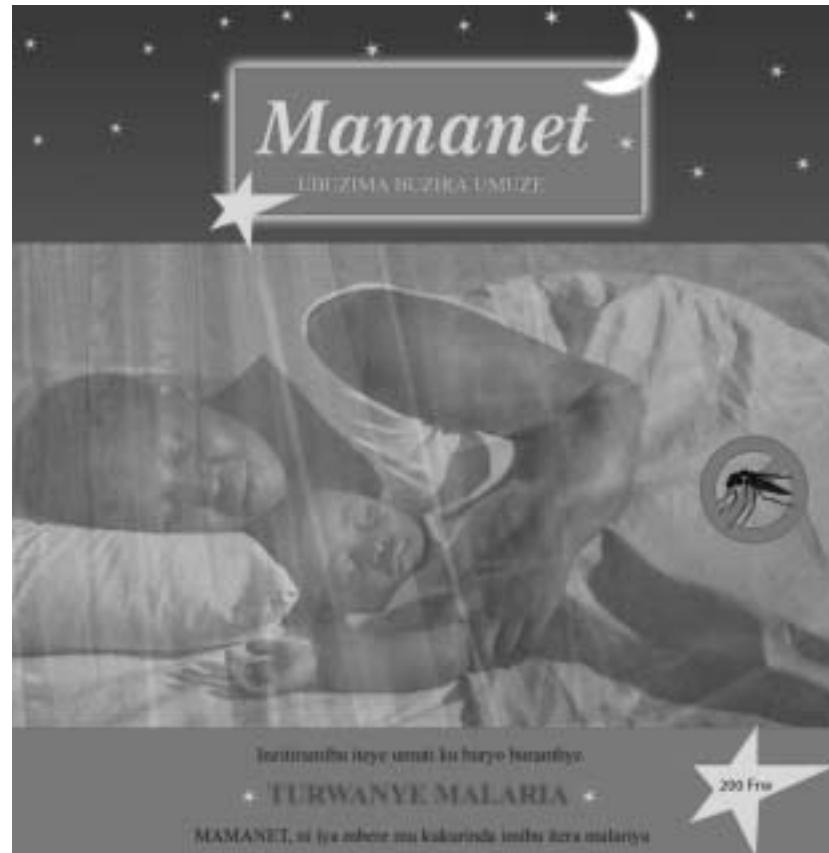
studies have shown that insecticide-treated nets significantly reduce the risk of morbidity and mortality in childhood

One study has shown that using untreated bed nets in good condition is associated with a significantly lower prevalence of *plasmodium falciparum* infection (51% protection) and these findings suggest that an untreated net, provided that it is in relatively good condition, can protect against malaria. Even so, untreated nets do not constitute a good intervention: just a single small hole is enough to render the net useless, and even when complete it protects only the person sleeping under the net. Others in the same room or shelter are not protected, and may receive more mosquito bites. In fact, insecticide-treated nets give much more protection than untreated ones, and the safety of the insecticides used and recommended by WHO for treating mosquito nets is well established.

One of the key constraints to the large-scale, sustainable use of ITNs is the need for regular insecticide re-treatment (every six months), and the fact that they lose efficacy after three washes. An ITN that is not re-treated rapidly becomes an untreated net, and is not useful. Unless a strategy for re-treatment is built into an ITN distribution programme, the distribution will have no lasting value. Successful strategies for re-impregnation have, however, proved very difficult to identify. In Kenya, a free house-to-house strategy achieved over 95% re-impregnation, but when the system changed to free re-impregnation at sentinel sites, the success rate went down to 65%. With the introduction of cost-recovery, only 7% of nets were re-impregnated. Community-based programmes among Afghan refugees have shown higher rates of re-impregnation.

Re-treating nets is now easier than in the past: tablets or sachets are available to treat the nets, and they do not require any technical skill to use. As a treated net lasts for around six months, and in some circumstances perhaps longer, it would be useful to develop kits allowing for long-lasting efficacy, in terms of years instead of months. Other techniques to tackle the issue of re-treatment include factory pretreated nets, health education and promotional campaigns. However, factory-pretreated nets are of variable quality, and the amount of insecticide on them is unreliable. They should not be used.

This does not apply to Long-lasting Insecticide Treated Nets (LLINs), which are manufactured in a different way. Two brands have been approved by the WHO Pesticide Evaluation Scheme (WHOPES), and can be recommended for use. One brand is composed of permethrin inside a polyethylene thread. The other comprises deltamethrin stuck onto polyester fibre, however, experience with this net is limited, and only monitoring over time will show whether it lives up to its promise.



©Rwanda's National Malaria Control Programme

A poster promoting bednets as part of Rwanda's National Malaria Control Programme

LLINs last, in general, for four to five years, and are wash-resistant up to 20 washes without the need for insecticide re-treatment. The LLINs made of polyethylene are stronger and more durable, and may be the most appropriate option for complex emergencies. It is certainly clear that, in LLINs, the insecticide is present and effective for much longer than in ITNs. Whatever type of net is being considered, quality control will always be important. WHO has recently established specifications and guidelines for net buyers and users.

Implementing ITN projects: operational issues and constraints

Many of the populations at most risk from malaria are extremely poor. Each illness episode costs a family substantial resources, and additional economic problems arise if malaria affects the men or women in charge of the household. The poverty implications of this disease are therefore enormous, making a compelling argument in favour of overall public-sector support for treated nets under normal conditions, with special emphasis on protecting pregnant women and young children. In the case of emergencies, ITNs should obviously be given free of charge.

many of the populations at most risk from malaria are extremely poor

The distribution of nets must be accompanied by health education sessions and work to raise awareness of mosquito-borne diseases, including malaria. UNICEF recommends that a good-quality education package needs to go hand-in-hand with the free distribution of ITNs. At household level, a sufficient number of ITNs must be distributed to cover the whole family. If nets are lacking, it is likely that children – who are among the most susceptible groups – will be excluded. In some emergencies, the distribution of any item of value, including ITNs, may make recipients a target for looting; in such situations indoor residual spraying (IRS) should be considered.

It could be difficult to distribute mosquito nets in camps for refugees or displaced people if the targeted beneficiaries are not accustomed to using mosquito nets. Nets must be culturally appropriate and accepted. Sometimes, nets are used not only for protection against insects, but also to provide privacy, warmth and protection against wind and dust. Keeping this in mind when setting up programmes and selecting tools would increase vector control. On the other hand, some aspects of camp life, such as the concentration of a previously dispersed population, may make it easier to distribute ITNs.

Efficacy and re-treatment under camp conditions may pose particular problems. Nets may easily be torn or damaged, and so lose their protective effect. It may also be difficult to ensure re-treatment every six months. Some types of temporary shelter may not be suited to ITNs, and may be too small to allow for hanging mosquito nets. In such circumstances, other vector control programmes like IRS should be considered. Conversely, in unstable security situations with frequent population displacement, ITNs may be a more reliable prevention method as the nets can be taken along during displacement.

Lastly, it is worth pointing out that the barriers to wide-scale bed net distribution are often not related to the particular situation, but to administrative and logistical constraints and the difficulty of transferring funds to the

for nets to be most effective, coverage must be high, nets should be re-treated promptly and individuals should properly deploy their nets each night

field; insufficient time to plan with partners; and transportation difficulties between ports and distribution sites.

Conclusion

It has been shown that, for nets to be maximally effective, coverage must be high, nets should be re-treated promptly (or long-lasting nets used) and individuals should properly deploy their nets each night. Net distribution needs to be accompanied by clear health education messages, a community participation programme and improved knowledge of at-risk groups. The size and shape of the nets have to be adapted to the size and shape of the houses, huts or dwellings concerned, and the preferences of the targeted people. Every opportunity should be taken to combine immunisation campaigns or other preventive programmes like antenatal care with the distribution and/or re-impregnation of nets. The biggest constraint, however, is the extremely slow rollout of ITN programmes, the ongoing debate about charging for nets and donor confusion about their effectiveness. Research is needed in emergencies to identify the factors and strategies that would achieve high coverage of ITNs in difficult environments.

Dr Willy Janssen has worked extensively in complex emergencies in countries including Somalia (1991–93), Burundi (1993), Bosnia (1994–97) and the Democratic Republic of Congo (2004). He was malaria technical adviser for Belgian Technical Cooperation in national malaria control programmes in Rwanda and Mali in 1999–2003, and was malaria adviser for RBM/WHO in Eastern DRC in 2004. Currently, he works for Belgian Technical Cooperation in Rwanda.

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Evaluating insecticide-treated plastic sheeting for malaria control in complex emergencies: an intersectoral approach

Matthew Burns, consultant

Millions of people around the world live in countries affected by conflict, where access to effective health care and basic food supplies may be very limited. Under such conditions, disease and malnutrition thrive, often leading to death. In the acute phase of emergencies, preventable diseases such as malaria contribute significantly to the death toll. High malaria mortality rates do not always imply an increase in mosquitoes among affected populations; high mortality can also stem from a failure to deploy effective malaria prevention efforts in a timely fashion.

The opportunity to reduce malaria-related mortality during the early stages of an emergency is often missed because of the long lead times needed to deploy the current mainstay techniques and tools. Current mainstay approaches to malaria prevention include Insecticide Treated Nets (ITNs – see pp. 11–13), Indoor Residual Spraying (IRS) and intersectoral approaches that help to motivate communities to participate in their own malaria prevention practices. However, there are numerous obstacles to overcome if these tools and methods are to have a measurable impact in complex emergency situations.¹ Although they are very effective under stable conditions, it is questionable whether such methods are practical in emergency situations, and even whether they can be deployed correctly by the end-user.

¹ See M. Rowland and F. Nosten, ‘Malaria Epidemiology and Control in Refugee Camps and Complex Emergencies’, *Annals of Tropical Medicine and Parasitology*, 2001, 95 (8), 741–54.

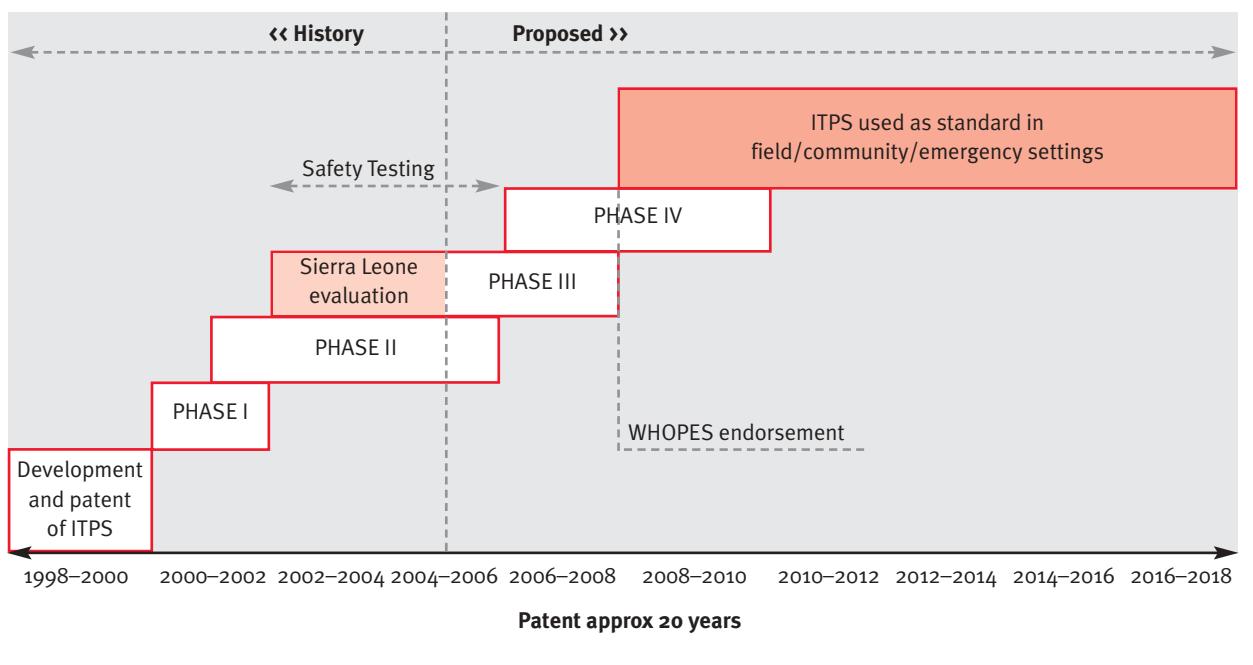
More needs to be done; ready-to-use, easily available and context-specific malaria prevention tools are essential to improve humanitarian response capacity to malaria among the world’s most vulnerable populations. This article looks at one such approach: Insecticide Treated Plastic Sheeting (ITPS). ITPS uses the same impregnation technology which has worked well for ITNs. In all other respects, it is identical to the standard plastic sheeting currently used for shelter by millions of people in emergency situations throughout the world.

Evaluating ITPS

Development of ITPS began at the end of the 1990s. Since then, it has undergone a stepped evaluation (see Figure 1). Phase I involved small-scale laboratory testing. In Phase II, small-scale field trials were carried out. In Phase III, beginning in October 2002, the tool was used operationally on a large scale in a real-time emergency situation, in Liberian refugee camps in Sierra Leone. The aim of Phase III was to measure whether ITPS had an impact on disease reduction by looking at clinical/parasitological indicators and entomological findings. The evaluation also looked at safety issues and user perceptions, all in an environment which contained many of the confounding factors typical in emergencies.

The evaluation of ITPS as a product has proceeded fairly quickly because the insecticide (Deltamethrin) has been endorsed by the World Health Organisation Pesticide Evaluation Team (WHOPES). However, validation of the

Figure 1: Stepped evaluation of ITPS



insecticide does not imply that the approach itself has been endorsed. The patent for the overall product is not on the insecticide incorporated into the plastic sheeting itself, but rather on the impregnation technology (migration-inhibiting molecules and UV filters) that enable the sheeting to release insecticide slowly over time. Therefore, complete endorsement of the tool is only likely after the results of tests relating to user and ecological safety are known.

The Sierra Leone work has now finished and, while final analysis was still pending when this article was written, crude trends suggest promising results. If further research is encouraging, there would need to be a transition from evaluation to monitored deployment (Phase IV evaluation), with a view to ITPS becoming a standard shelter material in emergency situations. It is of great importance in this key stage of activity that the patent timeframes are reviewed by coordinating bodies, donor agencies and implementing organisations, in partnership with the manufacturer, since this may have implications for how ITPS is used in the future. If these issues are not addressed immediately, this is likely to obstruct the transition from evaluation to officially endorsed distribution within camps.

ITPS: a universal tool?

It cannot be assumed, from a single field evaluation, that ITPS will be effective in all complex emergency situations. Many factors, both specific and general, will need further scrutiny.

Field-level analysis should focus on sharing information between sectors on how ITPS could be used within the field site, or whether current mainstay prevention tools and interventions are more cost-effective and sustainable. Decisions on whether ITPS is suitable for a particular situation will need to be based on several factors, including plastic positioning, the surface area the plastic covers, the level of malaria transmission (e.g. seasonal or intense perennial), whether the tool has been successful in similar settings, whether there is any known history of mosquito resistance to the insecticide in the ITPS, the likely duration of the emergency (i.e., whether it is likely to allow for optimum release of the impregnated insecticide) and whether there are specific phases in the emergency (acute, transitional, chronic) to which specific funds might be allocated, allowing for different malaria prevention strategies.

ITPS may not be appropriate in all emergency scenarios

Clearly, ITPS may not be appropriate in all emergency scenarios. For example, irrespective of how intense the malaria transmission may be in a given emergency, the extra costs of deploying ITPS would be wasted if camp planning teams envisaged using plastic only as an outside covering on top of thatched roofing. Mosquito contact with the plastic would be minimal, and there would

probably be no significant effect on the level of malaria infections within the beneficiary population. In natural disasters or political emergencies where preparatory time is minimal, it may be more feasible to stick to existing shelter responses and deploy alternative malaria prevention measures than to modify shelter planning to accommodate ITPS. In this scenario, ITPS effectively loses its key selling point, which is its 'dual-purpose' ability to combine shelter with effective malaria control.

ITPS is likely to be more effective in the acute phases of an emergency, when other malaria prevention tools and methods are not feasible (for instance when the shelter is too small to accommodate a hanging bed-net, or when the effectiveness of IRS is limited because of inappropriate wall structures). Shelters will be temporary, but likely to be constructed from plastic sheeting, and therefore there would be ample surface area coverage and proper placement to allow for a mass reduction in the mosquito and fly population (especially if temporary communal latrine structures are covered with ITPS), and hence a reduction in disease transmission. As the emergency continues, affected populations are likely to start building their own structures, and these may not use ITPS in areas of mosquito contact. This, combined with the fact that insecticide levels may have fallen to the point where there is no effect on mosquitoes and flies, means that ITPS is not an acceptable form of malaria prevention. This is obviously very important in planning at the field level, as ITPS should not necessarily be seen as appropriate for the entirety of the emergency, or as a substitute for the more conventional malaria control methods and tools that have proved effective in chronic settings.

Next steps, and planning

For the future, there could be a four-stage process, combining further research and planning with Pre-Implementation Situational Planning and Pre-Distribution Modalities. There needs to be a concerted effort from actors in different sectors to optimise the latter stages of evaluation; in parallel, a steering framework committee should focus on usage guidelines and the 'Software Elements' (for instance pre-distribution sensitisation outlines) which will be required for the successful application of ITPS in large-scale emergency situations.

Step 1: Further research and evaluation

- Further Phase III and Phase IV field testing (especially in a situation in which malaria transmission differs from Sierra Leone). Further research would be optimised through effective collaboration from different academic institutions to avoid duplicating work, whilst at the same time including different monitoring components, such as disease reduction, safety, ecological monitoring and cultural acceptance.

Step 2: Planning (can run concurrently with Step 1)

- Formation of an inter-agency ITPS Steering Committee (comprising academics, NGOs in health, shelter and water and sanitation, UNHCR, WHO and ICRC representatives). The committee's remit would be to standardise structural specifications for ITPS to meet

international (SPHERE, UNHCR, ICRC) minimum standards; prepare guidelines for the ethical and equitable use of ITPS in emergency situations; review logistical planning; and mediate between public and private organisations (the manufacturer) to ensure that ITPS is available for large-scale use in emergencies.

- Product endorsement by WHO/PES.

Step 3: Pre-implementation situational planning at the onset of an emergency (based on fulfilment of Steps 1 and 2)

- Review emergency type and local malaria transmission.
- Review proposed communal, dwelling and latrine structures to ascertain prospective ITPS usage and effective placing (for example, will ITPS be used in places mosquitoes will land or rest?).
- Estimate the degree of beneficiary acceptance (for instance, is there a history of plastic usage within the community?).
- Review donor and organisational purchasing and logistical frameworks.

Step 4: Pre-distribution modalities (based on fulfilment of Steps 1 and 2, and if Step 3 calls for ITPS usage)

- Intersectoral briefing sessions to review and finalise ITPS coverage for communal, dwelling and latrine structures.
- Pre-plan distribution and storage arrangements.
- Distribution of ITPS product and usage guidelines, and promotion of ITPS through camp meetings and focus group discussions.
- Ensure that there are adequate safety briefings and protection for users (gloves to reduce exposure to the insecticide).

There is still a lot to do before ITPS can be deployed to control malaria in emergency settings. Some may view the stepped approach outlined above as an impediment, delaying the point at which ITPS could be used to save lives. The contrary view would be that it is better, based on field evidence, to target ITPS in the most effective way

within emergency situations, whilst minimising the timescales for deployment and distribution by having a preformatted agenda. This may in the future limit the overall usage of ITPS, while leaving adequate financial resources in place for other preventative measures or case-management strategies that may be better matched to a given emergency situation. It is clear that alternative malaria control tools need to be developed that complement, or can be used instead of, ITPS if the malaria burden in all emergency situations is to be challenged effectively.

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Forecasting malaria epidemics

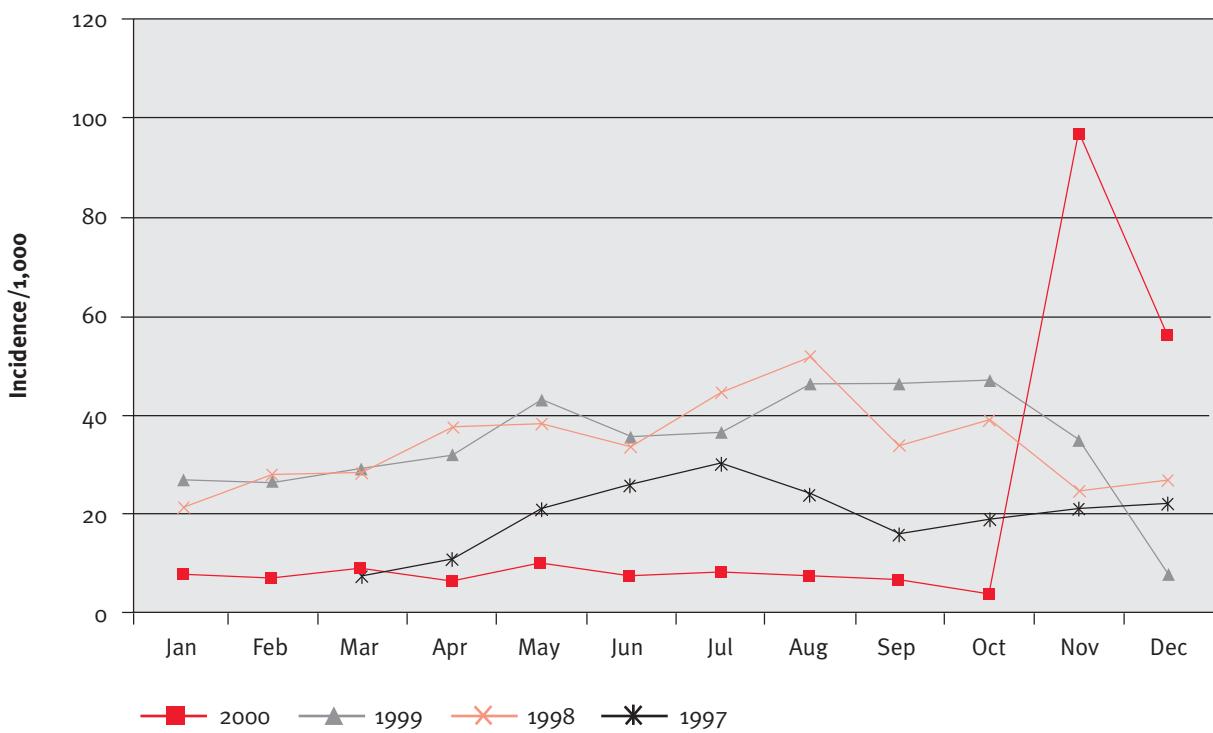
Caroline Lynch, London School of Hygiene and Tropical Medicine

Malaria epidemics are thought to be occurring more frequently than in the past. The reason for this increased frequency is widely debated. However, the most often cited factors are abnormal climate, modifications to the environment, increased parasite resistance to antimalarials and population movements.

An estimated 100 million people live in malaria epidemic-prone areas in Africa alone. Epidemic-prone areas are areas where little malaria usually occurs, such as highland zones, arid areas and desert fringes. Because transmission is low, people in these areas are not exposed to malaria as often

as people in higher transmission settings, and thus develop little or no natural immunity against malaria parasites. As a result, malaria epidemics often lead to very high levels of morbidity and mortality.

The early detection and containment of malaria epidemics is one of the four key priority areas for the Roll Back Malaria (RBM) campaign. In the RBM framework, epidemics are ideally detected within two weeks of onset. However, even if malaria epidemics are detected within this period, there is rarely enough time to act to reduce their impact.

Figure 1: Malaria incidence at a health centre in Gitega, Burundi, 1997–2000

What is a malaria epidemic?

The definition of a malaria epidemic depends on the local malaria situation. It is not possible to develop a global definition or threshold for malaria epidemics because malaria cases in epidemic-prone areas are seasonal, and vary greatly from year to year. Historical malaria records at health centres can be analysed to ascertain the ‘normal’ pattern for that area. If cases of malaria in a season increase greatly from the expected pattern, this may indicate an epidemic. The definition of *where* an epidemic can occur is another important, but difficult, question. For example, no malaria transmission is expected in areas above 1,750m, which means that just one malaria case in such an area could constitute an epidemic. However, this is too much of a generalisation as there is no firm line between high transmission on one side, and low transmission on the other.

Figure 1 shows how difficult it may be to define the point at which an epidemic is occurring. The graph shows data from just one health facility; others show different patterns in the same area. If you were a health coordinator in September 2000, what would you have done?

Although difficult, defining when a malaria epidemic occurs is still vitally important. If an epidemic is declared, resources can be mobilised and emergency measures put in place. These measures will be costly if it turns out that there is no epidemic. On the other hand, caution in declaring an epidemic will result in a late response, which will have no effect other than to reassure people that something is being done.

How is malaria affected by climate?

Temperature, humidity and rainfall are vital factors in regu-

lating the development of both mosquitoes and parasites. Temperature increases the development rate of the parasite during its lifecycle in the mosquito. Below 19 degrees centigrade for *P. falciparum*, and 15–16°C for the other species, parasites are unlikely to complete their cycle and hence spread further to humans. Temperature also affects the ability of mosquitoes to transmit malaria. Temperatures between 22°C and 30°C increase the potential lifespan of the mosquitoes, and increase the frequency of blood meals taken by the females, to up to one meal every 48 hours. Higher temperatures also increase the development of larval mosquitoes, shortening the amount of time it takes the mosquito to develop from egg to adult. Rainfall generally leads to a proliferation of new breeding sites for mosquitoes. However, rain can also destroy existing breeding sites; heavy rains can flush larvae and eggs out of breeding pools. Conversely, exceptional drought conditions can turn streams into pools, making them ideal for breeding. So, if rainfall, temperature and humidity can be measured, this could yield information on the level at which mosquitoes are breeding and surviving in a given area.

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Measuring the weather

Many countries in Africa have networks of weather stations measuring climate for agricultural purposes. However, local weather data is not always available or accurate, and other, indirect, climate monitoring tools are needed. Such information can now be provided from satellites. The measurement of vegetation and terrain through satellites has advanced rapidly since the 1970s, and measuring the factors that affect the development of mosquitoes is now possible from satellite-derived data. Some of these factors are described below.

Cold Cloud Duration

The cloud towers which cause rainfall in the tropics are called cumulonimbus, from the Latin *cumulus* meaning ‘heaped’, and *nimbus* meaning ‘rain’. Clouds with the coldest top surface produce the heaviest rainfall. It has become possible to estimate the amount of rainfall by measuring the temperatures of cloud tops using infrared images derived from satellites.

Certain temperature ranges will cause clouds to precipitate into rainfall. Generally, when the cloud-top temperature falls below approximately minus 40°C, some rainfall is occurring below. Such clouds are called cold clouds, and are visible from space. Satellites are able to measure the temperature of the cloud tops by remote sensing. The amount of time a cloud-top temperature remains below a defined threshold is known as the Cold Cloud Duration (CCD). Using CCD, we can develop an overview of the rainfall pattern over wide areas.

Vegetation status

The growth of vegetation (specifically primary vegetation) is related to rainfall in tropical areas. The relationship between rainfall and vegetation means that, by measuring vegetation through remote sensing, we can estimate both the timing and the amount of rainfall. Changes in the vegetation index over time have been shown to be a good indicator of the level of malaria cases.

Hydrology

Rainfall alone may not be a good indicator of malaria transmission risk in warm semi-arid areas. What happens to rain after it has fallen is an important factor, which can be measured by satellite or through examining the water levels of rivers or dams.

Putting it together: what is done with all the information?

By combining information collected through satellites, weather stations and health centre data, researchers have developed statistical models to help predict malaria transmission. Statistical models are mathematical representations, or simulations, of an actual situation or process. These can be either quite simple or, as is normally the case, they can be complex models incorporating many variables. Statistical models have been created which incorporate CCD, vegetation indices, meteorological conditions and historical malaria case data to describe possible relationships between these factors and whether these relationships can tell us anything about future malaria transmission.

statistical models are mathematical representations, or simulations, of an actual situation or process

Using these models, in some areas, malaria cases can be predicted up to a month in advance of an epidemic.

Is epidemic forecasting the answer to all our problems?

The short answer is no. Malaria epidemic forecasting is part of a wider framework, which involves identifying geographical areas or populations of epidemic risk, forecasting epidemics at a regional or national level, and providing early warning and detection of malaria epidemics.

Long-range forecasting

Long-range forecasting is a general system which uses weather predictions to determine whether the climate conditions for a malaria epidemic will occur. This forecasting would not be carried out at local levels, but at a higher level, to alert regional and national health authorities of the onset of abnormal weather conditions.

Early-warning systems at local level

With an alert of abnormal weather conditions ahead, health authorities at national level should begin to assess the situation locally. Rainfall, temperature and humidity should be monitored and analysed to determine whether abnormalities predicted at a regional level are occurring in the country itself. Unusual climatic events, such as heavier than average rainfall, prolonged drought or higher than average temperatures, could alert authorities to an impending epidemic. These warning systems could give health authorities 1–2 months’ prior notice of an epidemic.

Early detection of an epidemic

An early warning of an epidemic should also trigger more intense collection of data at health centres. Reports should confirm the occurrence of an epidemic past the normal levels. Having had prior alerts at regional and then national levels through forecasting and early-warning systems, the authorities should be able to put response measures in place.

What does forecasting mean for programming?

In the future, forecasting will mean more and better preparation for health programmes. A long-range forecast will alert regional coordinators to the possibility of epidemic conditions in their areas of work. This should filter down to health coordinators on the ground, so that data at health centres is monitored more frequently. Programmes that collect data on a monthly basis should step this up to weekly data collection, ensuring that health facility staff are using standard case definitions correctly.

Somewhere along the line, health authorities and health agencies will have to seriously consider obtaining and using locally available agricultural data in a formal way. Before long-range forecasts are in place, these will be the next best thing to determining the onset of epidemics.

Some tools already exist. The Mapping Malaria Risk in Africa (MARA) initiative uses epidemiological, entomological and weather data to develop maps which outline areas with different malaria situations throughout Africa. While MARA has provided maps down to country level, these are still considered a crude overview of the position. Nonetheless, these maps are valuable in determining whether health programmes are taking place in areas of high or low transmission. There are also WHO guidelines on epidemic thresholds for malaria. These are relatively easy to follow, but they require at least five years' worth of malaria data from health centres.

Forecasting problems with forecasting

One of the major problems in detecting epidemics is the collection of quality data which can be analysed to determine the past and present malaria situation. Very few countries in Africa have good surveillance systems, where case definitions are standardised and reporting is completed and entered on time for analysis. In these cases, malaria epidemics are detected one or two months after they have begun, or not detected at all. Epidemic forecasting encompasses good surveillance at health centre level, and as a result implies a need for drastic improvements in surveillance systems.

how accurate will systems have to be before donors invest in forecasting?

Another difficulty in declaring an epidemic is the additional burden this imposes on a health system. Health authorities have in the past been reluctant to declare epidemics. Providing free health care to the population of an epidemic area for the duration of an epidemic is expensive. In countries where resources are scarce and cost-recovery provides a substantial portion of health centre revenues, providing

free health care creates major problems for health ministries. Alerts can be provided to health authorities, but unless formal epidemic response systems have been put in place, the cascade of activities which are to follow alerts will not occur.

A final question is one which will inevitably be addressed to donors: with the *possibility* of a malaria epidemic, will donors invest in stockpiles of antimalarials, spraying equipment, insecticide and additional health and logistical personnel? How accurate will systems have to be before donors invest in predictions?

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Challenges to effective malaria control in refugee settings: experiences from Chad and Tanzania, 2004

Nadine Ezard, John Haskew, Lucas Machibya and Raoufou Makou, UNHCR

Malaria is an important cause of illness and death among refugees. The majority of today's refugees live in malaria-endemic areas: of the 19 million people of concern to the United Nations High Commissioner for Refugees (UNHCR), two-thirds live in malaria-endemic areas. Many factors may

promote vulnerability to malaria illness and death among refugees. As other articles in this issue describe, pregnant women and young children are particularly at risk of severe illness and death: in many refugee situations, women of child-bearing age and children make up the majority of the

population. Refugee camps are often sited on marginal lands that promote breeding sites for malaria vectors. Refugees may be malnourished, and access to adequate food may be limited, particularly in the phase immediately following flight. Travel may take refugees through or to areas of higher malaria endemicity than their place of origin. Control programmes may have broken down due to the conflict that caused population flight, or may never have been implemented. This article uses two case studies from 2004 to highlight the challenges of implementing effective and up-to-date malaria control in refugee situations: an emergency situation in Chad, and a more stable situation in Tanzania.

Case study 1: Chad

More than 200,000 refugees fled into Chad from the Western Darfur region of Sudan following the eruption of fighting and systematic violence against the population in 2003. Refugees are currently settled in 12 camps along the border with Sudan. Women and children make up the majority of the refugee population.

of the 19 million people of concern to UNHCR, two-thirds live in malaria-endemic areas

Eastern Chad lies in a zone of unstable seasonal malaria with a short transmission season, similar to that of West Darfur, the refugees' place of origin. The wet season extends from June to October, with up to 600mm of rain per year; rainfall decreases as one moves from south to north. The majority of the host and refugee population therefore has little or no immunity, and is at risk of severe malaria and death during the transmission season.

Health services for refugees are delivered by a number of different bodies. Local capacity in this region of Chad is very



Eastern Chad, 2004

limited. Health coordination is shared between the World Health Organisation (WHO), UNHCR and the Chadian Ministry of Health. Following an assessment in mid-2004, these agencies reached a consensus on malaria control interventions, including:

- standardised case definition and confirmatory early diagnosis using rapid diagnostic tests (RDTs);
- prompt treatment with artemisinin-based combination therapy (ACT); and
- prevention, using both indoor residual spraying (IRS) and insecticide treated nets (ITNs).

Amodiaquine plus artesunate was selected as first-line therapy for uncomplicated malaria in refugee settlements on the assumption that chloroquine resistance was widespread in the area. At the time of the emergency, chloroquine was still being used as first-line treatment in Chad, although a pilot ACT programme in one southern district had begun. Chloroquine resistance had been demonstrated in Sudan, and the treatment protocol had recently been changed to ACT. Nevertheless, delays in procuring supplies for some agencies held up the implementation of the new protocol, and training of clinic staff was not undertaken in all camps. Not all clinicians were convinced by the new protocol or by RDTs.

Shelters in the camps and host communities were targeted for IRS. However, the approach was not standardised. In the north, one agency sent a malaria specialist to coordinate malaria control activities in three camps, and to assist in training in two additional camps. IRS was completed in northern camps ahead of the rainy season. Effective implementation was delayed beyond the start of the rainy season in the south due to delays in the procurement of supplies, a lack of trained personnel, the early onset of the rains and logistical limitations.

ITNs were distributed through a number of different delivery mechanisms and partners, and to different groups of beneficiaries. Deficiencies in monitoring and coordination resulted in duplication or, at times, lack of coverage. Failure to implement effective community information, education and promotion, compounded by food shortages, resulted in nets being resold. The exception to this was the distribution of insecticide treated shelters (*dumerias*) in one camp where shelters were too flimsy to support either IRS or ITNs; reportedly, the *dumerias* enjoyed good community acceptance and retention.

Regular health coordination meetings were established. Fully effective coordination was limited by large distances, poor infrastructure and telecommunications, insufficient professional staff to allow some to be released to attend meetings, and high turnover of personnel. However, malaria was included in outbreak preparedness plans. Monitoring and evaluation was limited by the lack of an

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Eastern Chad, May 2004

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distribution being postponed until the next rainy season, except for inpatient beds. Long lead times for net procurement meant that there was insufficient time for community education and participation. In a community that is not familiar with nets, and which faces competing survival priorities, net resale is likely. In many settings, ITNs and IRS were provided to the same household, which was an unnecessary drain on resources. For the future, a common ITN distribution plan could be drawn up specifying target groups, along with distribution mechanisms, community participation strategies, logistics plans and reporting duties.

Case study 2: Tanzania

At the end of 2004, some 400,000 refugees from Burundi and the Democratic Republic of Congo were living in 14 long-standing camps in western Tanzania. Several agencies provide health services to these populations.

Malaria is the number-one cause of illness and death among children under five years of age in these camps. Transmission is perennial, with seasonal peaks associated with the rainy season (October to May). The first formal malaria assessment for refugee camps was conducted in 1998, when reports of very high numbers of malaria cases and malaria deaths prompted development of a comprehensive and effective response to malaria control in Tanzania. At the time, children and women of childbearing age, at high risk of severe malaria and death, accounted for 75% of the population.

In view of chloroquine resistance, the first-line treatment protocol for uncomplicated malaria in refugee camps was changed from chloroquine to sulfadoxine-pyrimethamine (SP). This change was ahead of national protocol. Health workers were trained on the presumptive treatment of malaria, first-line treatment was decentralised to health posts, and active case-finding and follow-up at the community level were added. At the same time, intermittent preventive treatment (IPT) in pregnancy with SP (two doses) was implemented, with high levels of antenatal coverage. These changes were incompletely implemented, there was great variation between partners and confirmatory diagnosis was carried out on an *ad hoc* basis.

Approaches to prevention include environmental control (draining of standing water in camps, larviciding in some camps), IRS and ITNs. The approach to prevention is not consistent: prevention has alternated between IRS and ITN distribution, or both have been implemented simultaneously. Widespread IRS implementation began in most camps in 1998. Implementation varies by agency and by camp. A variety of insecticides is used, and spraying is consistently late, after the commencement of the rains, at

effective common reporting system. Basic health and mortality data were not reported reliably from all camps.

By the end of 2004, no increase in malaria incidence during the rainy season was observed, and case fatality rates remained low. These observations may have perhaps been due in part to more effective malaria control measures. Strengths in the response include the consensus among partners on an intervention strategy, based on a situation analysis, and the early adoption of ACT as first-line treatment. IRS was implemented effectively in some camps.

At the same time, however, no common organisational framework and division of responsibilities was agreed. This resulted in the fragmented implementation of interventions, which weakened the overall response. Improved coordination, in the form of regular sectoral meetings, would have identified priority areas for action, as well as the weaknesses of the various agencies. A data collection system with agreed indicators would have improved monitoring capacity. An overall focal point for malaria could also be appointed to ensure the coordination of activities in all camps and communication between partners, and to facilitate the pooling of logistics, expertise and other resources.

A more coherent operational framework between partners for IRS would have identified priority areas such as the south, and allowed for the pooling and redirection of resources. Pre-positioning of equipment and supplies before the onset of the rains would have ensured a more timely response. In retrospect, the focus in some camps on prevention campaigns of probably limited effectiveness was at the expense of adequate supplies, training and supervision to ensure the provision of life-saving treatment.

A thorough assessment of the preconditions necessary for an ITN programme in an emergency may have led to the

considerable annual cost. As for ITN, although large-scale distribution began in late 1998, by August 1999 20% of the nets were missing. Resale was common, often to provide money to add variety to or supplement inadequate food rations, and poorer households were more likely to sell nets to buy food. In settings where individual households have competing survival priorities, community IRS might be more effective in preventing malaria than ITNs. Community information, education and engagement were lacking, and this contributed to low retention rates.

Coordination was improved with the establishment of camp- and district-level malaria task forces. Standard data collection (morbidity, mortality) was implemented in 2000 in all camps, supplemented by entomological data and periodic net-retention surveys in some camps.

The Tanzania experience demonstrates that elements of an effective malaria control programme can be implemented in refugee settings: assessment, improved access to efficacious treatment, implementation of appropriate preventive measures, establishment of coordination mechanisms and standardised data collection. But it also highlights some of the practical difficulties of ensuring that control programmes are effective in reducing malaria illness and death. Late spraying of IRS is common in malaria-endemic areas. Poor ITN retention is also typical where community engagement is lacking, and where there are competing survival priorities. The treatment protocol again needs updating in the face of increasing SP resistance.

As in many stable settings, there is a need for formal periodic reassessment and mid-term evaluation. The challenge today is to implement an effective and coordinated prevention campaign across all camps, up-to-date treatment protocols with effective antimalarial drugs (ACT) and improved diagnostic coverage. Implementation plans should also include community engagement, the training and supervision of health workers, and monitoring and evaluation.

Conclusion

The Chad and Tanzania examples described here demonstrate the feasibility of implementing malaria control in emergency and refugee settings. The prompt implementation of an interim treatment protocol using ACT and RDTs in Chad should be used as a model for other emergencies. The approval of the change in the malaria treatment protocol in Tanzanian refugee camps, ahead of any changes to the

malaria control in refugee settings is possible, both in emergency situations and in stable environments

national protocol, is an example that can be followed in other stable settings. Successful conduct of IRS in many of the camps in Chad, despite logistical hurdles, is testimony to a capacity among agencies for good planning and implementation, and for sharing resources and expertise. In Tanzania, a common disease surveillance system and regular surveys strengthened programme monitoring and evaluation.

Some things could have been done better. The lack of community participation, for example, had a negative effect on ITN programmes. In Tanzania, evaluation and reassessment are required before planning changes to treatment and prevention strategies. In Chad, the response was sometimes not prioritised towards life-saving needs. In retrospect, the preconditions for IRS and ITN programming were not met in all settings, and the focus should have been on implementing effective treatment. More effective coordination could have improved the response in both Chad and Tanzania. Strengthened training and supervision in implementing new treatment protocols was also required. Common indicators for programme monitoring would have improved the response in Chad.

These examples show that malaria control in refugee settings is possible, both in emergency situations and in stable environments. Adherence to common principles for up-to-date and effective malaria treatment and prevention – for Africa this includes ACT, confirmatory diagnosis, treated nets or indoor residual spraying – is essential to ensure that priority areas are addressed adequately. Ongoing documentation of field experience by practitioners will also be important to further develop and refine these common principles.

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Malaria: experience, practice and lessons learned in ECHO-funded medical projects in West Africa

Jorge Castilla, ECHO

ECHO – the European Commission Directorate-General for Humanitarian Aid – funds relief operations for victims of natural disasters and conflicts outside the European Union. Aid is channelled impartially, straight to victims, regardless of their race, religion or political beliefs. Resources are not limitless and priorities are given to acute needs, with a particular focus on situations where mortality is high, sudden and greater than usual trends. A frequently used term to describe this above-average mortality is ‘excess mortality’. A proper needs assessment is therefore a key element to initiate dialogue between ECHO and a partner seeking funding for a project. ECHO is a donor, not a technical body. Partners are therefore expected to have the necessary technical competence to ensure that they are working in line with best practices in the field. Nevertheless, a partner’s experience and competencies vary enormously. ECHO medical experts collect the experience generated in funded projects to describe the evolution of practice and trends in those projects.

In West Africa, malaria prevention, diagnosis and treatment is not funded as a stand-alone activity, but as an element of a larger health project. Malaria epidemics can be an exception to this general trend.¹ During an acute emergency, with high crude mortality rates and high under-five mortality rates, malaria is frequently a leading cause of death. Providing adequate diagnosis and access to effective treatment reduces mortality. The proportion of suspected malaria cases in a typical ECHO-funded health project in West Africa is between 20% and 35% of all consultations, depending on the season and the area.

During the last 2–3 years, many questions have arisen regarding the treatment protocol for malaria in West Africa. High resistance has developed to chloroquine and to sulfadoxine-pyrimethamine in most of Africa.² In June 2004, 11 of the 17 countries covered by the ECHO regional office for West Africa had chloroquine as their first-line treatment in the national protocol, and four had first-line Artemisinin combinations.³ By June 2005 the situation had reversed: chloroquine was still officially the first-line treatment for five countries, while 11 officially had Artemisinin-based combinations as first-line treatment. Not all 11 have implemented the change in practice, however.

¹ There is no clear definition of a malaria epidemic. For practical guidance, see

http://mosquito.who.int/cmc_upload/o/ooo/016/569/FTest.pdf.

² See ‘Five In Vivo Efficacy Studies of CQ, SP, AQ in Sierra Leone’ (partially Echo funded), Epicentre, February 2005, <http://www.epicentre.msf.org/news>.

³ The 17 countries are: Cape Verde, Mauritania, Senegal, The Gambia, Guinea-Bissau, Mali, Burkina-Faso, Guinea-Conakry, Sierra Leone, Liberia, Ivory Coast, Niger, Ghana, Togo, Benin, Nigeria and Chad.

Mortality due to malaria is more effectively reduced by using a treatment to which there is no or little resistance, among which Artemisinin Combination Therapy (ACT) is the recommended option. Studies in Senegal point to a two- to 11-fold increase in mortality after resistance appeared.⁴ The important difference in cost between chloroquine and ACT should be highlighted as an obstacle to the rapid and generalised introduction of ACT. ECHO faces some difficult questions regarding the funding of malaria treatment in West Africa. What should be done when partners’ proposals include ACT, but ACT is not part of the national protocol? What should be done with proposals that still include chloroquine in accordance with a national protocol, when resistance to chloroquine is known to be high? If, as an exception authorised by the ministry of health, a certain area and population is covered with ACT for a limited time, what are the consequences and the possibilities for the future? In eastern Chad, for example, ACT is allowed as an exception due to the excess mortality linked with the arrival of refugees from Darfur. These questions have been partially answered in practice by the drastic evolution in the national protocols in the last 12 months, as described above.

Malaria should always be treated with an effective treatment protocol. Targeting the most vulnerable populations will effectively reduce mortality. Among vulnerable populations, children under two years of age and pregnant women are an absolute priority. Children under five, malnourished children and children with HIV are also a priority. Pregnant women should receive Intermittent Presumptive Therapy (ITP)⁵ if this is part of the national protocol.

ECHO’s current practice

Table 1 (overleaf) shows some of ECHO’s current practices in funding malaria treatment.

ECHO is open to providing the additional cost of ACT as first-line treatment because it is often the case in ECHO-funded programmes that the first contact with the malaria patient will be the only contact, and a first-line non-ACT treatment is not as effective in reducing mortality. Combined tablets or co-formulated blister packs are the preferred options for ACT, as they facilitate the intake of two different combined medicines and increase compliance. Using ACT rather than chloroquine increases the cost per treatment by at least one euro, depending on the combination chosen and the type of diagnostic confirmation used. For example, a 2001 project that performed 100,000 consultations a year, 30% of which were chloro-

⁴ J. F. Trape et al., ‘Impact of Chloroquine Resistance on Malaria Mortality’, *C R Acad Sci III*, 1998; 321: 689-97 [PubMed].

⁵ A sulfadoxine-pyrimethamine complete treatment during the last two-thirds of pregnancy in endemic areas, without symptoms or diagnostic.

Table 1: Some of ECHO's current practices in funding malaria treatment

Context	ECHO decision
National protocol is ACT	Fund ACT
National protocol accepts ACT and resistance to other treatments is over 15%	Fund ACT
National protocol accepts ACT and resistance is unknown or below 15%	Fund ACT where partners propose it Fund national protocol treatment if partners propose it in areas where resistance is less than 15%. In areas where resistance is not known, fund national protocol treatment only if resistance studies are done at the same time
National protocol forbids ACT and resistance is over 15%	Support the partner asking for an ACT exception in the case of excess mortality in a particular area and population, e.g. refugee arrival
National protocol forbids ACT and resistance is unknown	Accept national protocol only if coupled with resistance studies (ECHO has funded resistance studies on a case-by-case basis)

quine-treated suspected malaria, cost 1,100,000 euros. The same project using ACT, RDT and targeted impregnated mosquito net distribution would cost around 1,155,000 euros today (a 5% increase).

Situations with acute excess mortality require diagnosis and treatment to be not only adequate, but also accessible. ECHO partners are advised to make malaria treatment available at no cost in West Africa when ECHO funds have been provided. Partners could also choose to ask for a fee; in that case, there are specific rules for cost recovery in ECHO-funded projects, and the effect of the fee on accessibility to treatment should be analysed. In cases of acute excess mortality, there should be no economic barrier to appropriate diagnosis and treatment in ECHO-funded projects.

The most challenging scenario from a managerial point of view is also the most common in West Africa: the national protocol is changing, but the shift in the field has not yet begun, or is just starting. Training, procurement and strategies for the introduction of protocol changes and many other elements have to be dealt with in order to prevent bottlenecks to implementing the change. The increasing demand for ACT is straining production capacity, and this could cause shortages of medicine. There is also a greater risk of finding counterfeit drugs. Procurement and quality assurance are therefore important elements of a proposal.

ECHO-funded projects prioritise treatment over prevention

Appropriate treatment is also dependant on appropriate diagnosis. Up to 500 million people are diagnosed with malaria every year, many of them only on the basis of clinical signs which can be as unspecific as fever. It is estimated that, in up to half of suspected cases, fever may in fact not be due to malaria but to other causes.

Malaria diagnosis with available laboratory tests (i.e. microscopy or rapid diagnostic tests (RDT))⁶ increase confidence in the treatment and reduce the risks of prompt resistance through misuse of the treatment. Negative diagnostic results encourage us to search further for other causes of the symptoms. Microscopic diagnosis is cheaper and more sustainable. RDTs are to be considered as an emergency or intermediate measure when microscopy is not available, or when the burden of tests makes microscopy a hindrance to timely treatment. A combination of RDTs for small children and pregnant women and microscopy for the rest is an option. RDT may be the only way to confirm malaria in pregnant women when malaria parasites are sequestered in the placenta. Despite stressing the need for appropriate diagnosis, there are situations where laboratory confirmation is not required; this may be the case in malaria epidemics. Confirmation may not be a requirement for children under five years in high-transmission areas. It is nevertheless imperative to look for alternative causes of fever in each child.

ECHO-funded projects prioritise treatment over prevention. Programmes that include both treatment and prevention spend around one euro on prevention for every four euros spent on treatment. When prevention is included in a proposal, the prevention elements focus particularly on pregnant women, children under two years of age and severely malnourished children. Preventive activities in emergency settings include impregnated mosquito nets if the population is already familiar with their use, with a preference for long-lasting nets; indoor residual spraying has sometimes been supported when expected coverage is higher than 80% and the malaria season is imminent (but has not yet started), and the shelter material allows for indoor retention of the insecticide. ECHO has also funded trials of insecticide-impregnated plastic sheeting.

⁶ Histidine tests (HRP-II) detect only Falciparum malaria (which is the cause of malaria deaths). Dehydrogenase tests (pLDH) detect both Falciparum and Vivax mal.

In conclusion, whenever possible ECHO is funding evidence-based, effective approaches to reducing malaria mortality and morbidity, mostly within the framework of a larger health emergency project. In general, ECHO is supporting the shift from traditional, less effective protocols to ACT protocols where a high resistance to the medicines used is proven or suspected.

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The intersectoral response to the malaria epidemic in Ethiopia in 2003: an assessment

Yolanda Barbera Lainez, International Rescue Committee

This article reviews the epidemic transmission of malaria in Ethiopia, and the indicators that warned the Ethiopian government about the likelihood of an epidemic from April to December 2003. It examines the responses undertaken by different actors to the epidemic, and places the timing of the response in the context of the epidemic season. Finally, it indicates lessons learnt, with a view to increasing the effectiveness of future responses in similar situations.

Malaria transmission in Ethiopia

According to the Ethiopian Federal Ministry of Health, malaria in Ethiopia ranks first in communicable diseases, with 65% of the population living in malarious areas. The problem is compounded by more frequent epidemics, combined *P. vivax* and *P. falciparum* infections, and increasing drug and insecticide resistance. Depending on location, malaria transmission is perennial and endemic (with a transmission period of 7–12 months), seasonal and endemic (4–6 months) or strongly seasonal or epidemic (1–3 months). ‘Endemic areas’ are defined as ‘areas with significant annual transmission, either seasonal or perennial’. An epidemic, by comparison, is the occurrence of disease cases in a population or region that clearly is in excess of normal expectancy. The term ‘epidemic’ may acquire different meanings according to the timeframe in which it is considered. In Ethiopia, in the ‘epidemic areas’, high numbers of malaria cases are expected during particular months, and very few or none during the rest of the year. This is considered strongly seasonal or epidemic transmission. However, some epidemic-prone areas may not experience any seasonal epidemic in some years if environmental conditions are not conducive. Aside from this seasonal variation, there is also an inter-annual variation in the number of malaria cases. In Ethiopia, it seems that there is a major malaria epidemic every eight to ten years, and concerns that 2003 would be a major epidemic year prompted the intersectoral response this paper reviews. The epidemic occurred at different times depending on the region, but overall it is believed to have started in April, and lasted until the end of December.

Warning indicators

In April 2003, many areas of Ethiopia began reporting an abnormal number of malaria cases. In July, the Health Ministry indicated that a major epidemic (‘an inter-annual epidemic’) could occur in the coming months, and prepared an emergency malaria project proposal for submission to donors.

The Ministry’s rationale was based on meteorological indicators, ten-year caseload data from the three largest regions indicating an emerging epidemic, malaria case trends reported by regional health bureaus and vulnerability indicators. These indicators included factors such as drought and malnutrition, low background immunity between inter-epidemic years, population movement and a recent water harvesting development policy that had increased the number of mosquito breeding sites.

in April 2003, many areas of Ethiopia began reporting an abnormal number of malaria cases

Stakeholders’ roles

Most donors opted to respond to the epidemics through the existing health system, with UNICEF as the lead agency. The donors most involved in the response were, by decreasing order of financial contribution, the US, the UK, the Netherlands, Norway, the World Health Organisation (WHO) and Ireland. From the approximately \$7.8 million provided by donors to respond to the malaria emergency, 88% (almost \$7 million) was channelled through UNICEF. UNICEF played a key role in coordinating the response, procuring the bulk of malaria drugs and supplies and providing the majority of operational funds requested by the regions for training, indoor residual spraying, outbreak investigation and response, social mobilisation and supervision. In addition, UNICEF appointed an expert in malaria epidemic forecasting and detection to determine the exis-

tence, likely duration and extent of the epidemic. According to the consultancy report, malaria epidemics were observed in all drought-affected areas in which health facility data for 2003 were obtained, and extensive supporting primary evidence from a range of organisations suggests that the observed malaria epidemics were not a local phenomenon.

From the government side, the lack of an official declaration of a malaria emergency or epidemic by the Ministry of Health created an accountability vacuum at all administrative levels: regional, provincial and district. Government regional health bureaus (RHBs) were decisive in accessing UNICEF funds for operational costs. The only conditions on accessing these funds were the liquidation of previous UNICEF funds and the preparation of a plan for the activities to be undertaken at provincial level. Delays in satisfying these two requirements were the main causes of late access to operational funds by regional authorities.

NGOs also played an active role: Médecins Sans Frontières, Merlin, Care, World Vision and Goal supported the provincial and district health desks and offices in their areas of operation. This support mainly consisted of coordination assistance, logistics, outbreak response and the provision of drugs and supplies. Most NGOs met intervention costs from their own budgets, or without prior donor commitment.

the lack of an official declaration of a malaria emergency or epidemic by the Ministry of Health created an accountability vacuum

Strategy

The strategy of the response was agreed by the Ministry of Health, WHO and UNICEF at the beginning of October. It consisted of rapid anti-malaria drug distribution, outbreak response, indoor residual spraying (IRS), insecticide treated net (ITN) distribution and community mobilisation and education.

Rapid anti-malaria drug distribution

During the malaria epidemics, health authorities, NGOs and community representatives raised concerns about the efficacy of sulphadoxine-pyrimethamine (SP), the first-line anti-malarial drug in Ethiopia for uncomplicated *P. falciparum*. In addition, the Drug Administration and Control Authority in Ethiopia did not allow the import of non-registered anti-malarial drugs during the epidemic, and the Health Ministry discouraged attempts to introduce effective drugs (ACT, artesunate suppositories and artemether injections) on an emergency basis. Therefore, SP accounted for the bulk of the drugs ordered by UNICEF for the epidemic.

Generally, the expected impact of rapid anti-malaria drug distribution on morbidity and mortality was greatly dimin-

ished by delays in delivering drugs to villages, the late availability of operational funds for the regions (which would have eased drug distribution problems at lower levels), the inappropriateness of the malaria diagnosis and treatment guidelines for Ethiopia in an epidemic context, and the reluctance of the government to introduce effective drugs.

donors provided substantial funds to ensure adequate drug supplies

Donors provided substantial funds to ensure adequate drug supplies. Overall, 16.5 million anti-malaria treatments were ordered between July and November 2003, and 13.8 million treatments had been distributed to the provinces by the end of December (see Figure 1). Most drugs did not reach community levels until the end of the epidemic season; 2.8 million treatments (17% of the total requested) did not arrive in the country until after the end of the epidemic season.

Outbreak investigation and response

Outbreak investigation and response was complicated by the considerable distances between health centres and affected communities, inadequate protocols for early response, many districts' lack of knowledge or adherence to the guidelines on malaria control and the general problems of drug availability. In addition, the outbreak investigation and response was dependent on funds to cover health workers' costs and vehicle rentals. As most operational funds did not arrive at the district level before mid-November, the outbreak response was weak, and dependent on the ability of local authorities to divert funds and mobilise NGOs in affected areas.

Indoor residual spraying

Indoor residual spraying (IRS) in Ethiopia has long been one of the most popular interventions for malaria control. IRS requires high coverage if any protection is to be achieved, and the required coverage must be achieved before and throughout the transmission season. Timeliness is particularly important in the control of epidemics. Therefore, the requirement that effective coverage should be maintained during the entire transmission season implies that spraying of the whole area to be protected should be completed before the beginning of that season.

For a variety of reasons, it is very unlikely that effective spraying operations were undertaken during this malaria epidemic season. Malaria transmission in Ethiopia's seasonal epidemiological settings usually ends in December, IRS coverage must be achieved beforehand and maintained during the transmission season, operational funds were not available to the regions until November, financial flows to districts were slow, donors were reluctant to provide funding because IRS guidelines in Ethiopia involved the use of dichlorodiphenylchloroethane (DDT), an insecticide banned

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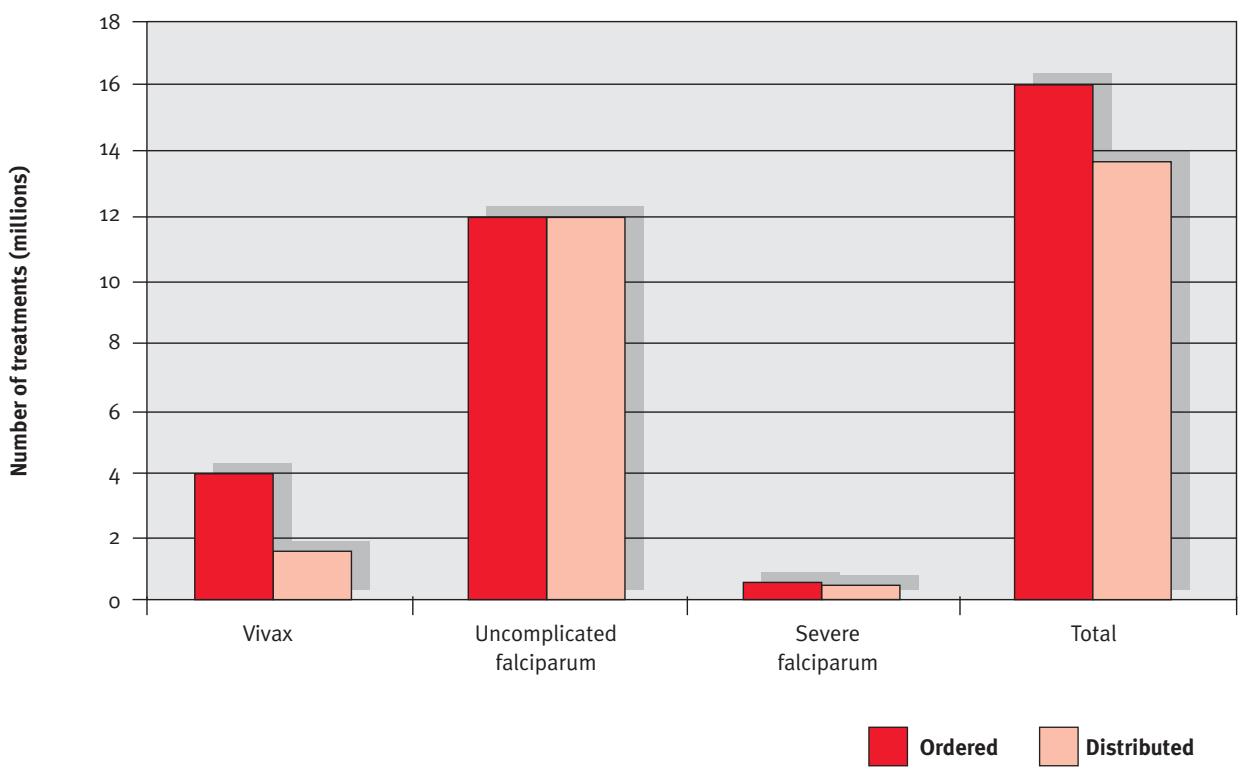
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Figure 1: Number of malaria treatments ordered and distributed during the malaria epidemic in 2003

in the US in 1972, and organising spraying teams is time-consuming.

Insecticide treated net (ITN) distribution

While ITNs are effective once they are in the field and used correctly, they are not recommended as a first-line strategy for acute emergencies because: (i) they take a long time to arrive in-country and take up a large proportion of the budget; (ii) achieving a high geographic coverage requires complicated logistics; and (iii) achieving effective usage and avoiding resale and inappropriate use all require ongoing community mobilisation.

ITNs are not recommended as a first-line strategy for acute emergencies

There is no tradition of ITN use in Ethiopia, and UNICEF started the implementation of a countrywide campaign to increase insecticide treated net coverage through a revolving fund stock with pre-treated nets in 2000. To respond to the emergency, UNICEF had ordered 290,000 pre-treated nets, but the agency decided to mobilise its ITN stock to rapidly obtain coverage, and integrate it with the ordered ITNs after arrival.

An estimated 57,000 ITNs were distributed during the malaria epidemics. Most of these were old pre-treated nets

with uncertain insecticide content. ITN leakage was reported in Somali Region, and beneficiary targeting and effective use were not monitored. Even in ideal circumstances, this intervention could only have provided protection to 57,000 households, accounting for about 20% of the ITNs envisaged for the malaria emergency. This supports the view that only immediately available stocks of long-lasting ITNs in emergencies will be effective in stopping an ongoing epidemic.

Community mobilisation and education

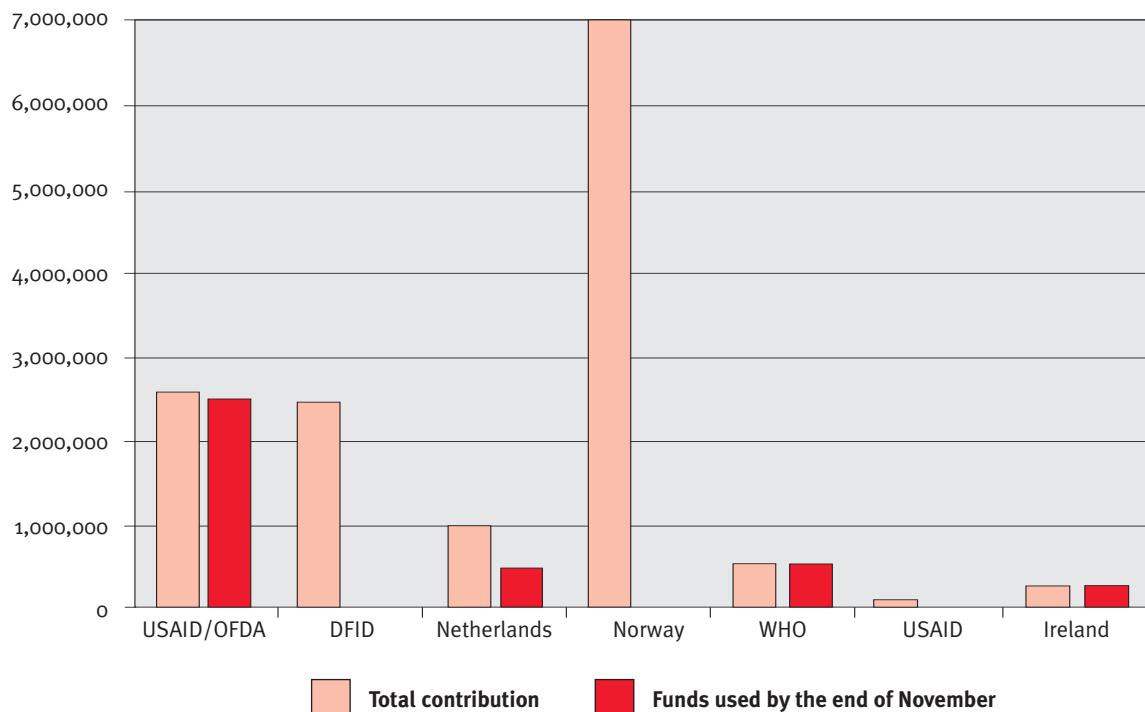
Although community mobilisation was planned for district levels, operational funds did not arrive at these levels before mid-November. Thus, the degree of timely mobilisation achieved through donor financing was low. Here again, the degree of community mobilisation achieved during the malaria epidemic season depended mainly on the initiative of the provincial and district health desks to divert existing funds and to mobilise local stakeholders.

Chronology of the response

An analysis of the response chronology indicates that all the key steps in the malaria response were significantly delayed. This translated into late regional access to drugs, ITNs and operational funds. By the end of November 2003, only 50% of the funds made available for the malaria response had been used. Figure 2 illustrates the funds used versus each donor contribution by the end of November.

Lessons learned

Many constraints of the response to the 2003 malaria epidemic season relate to chronic structural deficits within

Figure 2: Funds used vs. donor contribution (US\$)

the existing health system, which require long-term investment and development. The main challenges specific to this epidemic response were:

- A lack of consistency between the Ministry of Health's request for donor help and its own commitment to the malaria response, as shown in the failure to declare an epidemic, and a reluctance to accept measures such as ACT to deal with the emergency.
- Problems of coordination, leadership and clarification of roles in the response.
- Limitations in regional capacity to absorb and utilise large amounts of cash rapidly and effectively, and slow accounting of funds advanced for other activities, such as polio and measles campaigns.
- Lack of a fast-track system for customs clearance of emergency life-saving supplies.

The main lessons learned during the 2003 malaria epidemic response in Ethiopia are:

1. A comprehensive and effective response cannot be implemented without sufficient government commitment.
2. A clear management and leadership framework should

already be in place, in which roles and responsibilities are clearly set out.

3. Disbursement of emergency funds to main emergency implementers should not be contingent on the prior liquidation of other programme funds.
4. A contingency stock of emergency items should be pre-positioned.
5. An assessment of possible funding constraints should be made ahead of time.
6. A fast-track customs system should be developed before the next epidemic.
7. The Federal Ministry of Health should re-evaluate its outbreak response guidelines and examine its drug policy before the next epidemic.
8. Systems for ensuring effective and continuous surveillance should be in place.
9. NGOs should receive adequate financial support to respond to epidemics.

Yolanda Barbera Lainez was malaria emergency technical advisor for the Mentor Initiative from September to December 2003, seconded to the Disaster Assistance Response Team (DART) of the US Agency for International Development's Office of Foreign Disaster Assistance (OFDA). Her email address is: yolabar@tiscali.it.

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The impact of HIV/AIDS on older people

Faith Mall, HelpAge International

Over the last decade, the HIV/AIDS epidemic has had devastating economic, social, health and psychological impacts on older women and men, especially in Sub-Saharan Africa. International statements such as the UN Declaration of Commitment on HIV/AIDS and the Madrid International Plan of Action on Ageing explicitly commit governments to addressing the particular needs of older people affected by HIV/AIDS. Yet the impact of HIV/AIDS on older people remains under-reported, and has not been properly addressed.

HIV/AIDS affects older people in two main ways: it places a burden on them as carers, and it poses a direct infection risk. A research study conducted by the World Health

Organisation (WHO) in Zimbabwe found that over 70% of carers of people with HIV-related illnesses are over 60 years of age. Research by HelpAge International in Thailand found that 70% of people living with HIV were in the care of older parents or relatives shortly before their death. Older people are also increasingly responsible for the care of children orphaned by HIV/AIDS; in Sub-Saharan Africa, as many as nine out of ten AIDS orphans are cared for by their extended family, in many cases their grandparents. In terms of their own vulnerability to infection, older people are largely invisible in international data on HIV/AIDS. Data on infection rates does not include over-50s, despite the fact that older men and women continue to engage in sexual relations into old age. However, their understanding of the nature, cause and transmission of HIV can be limited, as they seldom have access to information on it, and awareness campaigns typically target the young, not the old.

the impact of HIV/AIDS on older people remains under-reported, and has not been properly addressed

HelpAge International undertakes work directly supporting older people affected and infected by HIV/AIDS, and advocates for the inclusion of older people in responses to the disease. As the epidemic has progressed, HelpAge International and its partner organisations have launched



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Community care in Malawi: a grandmother with four orphaned grandchildren

a response through programmes that combine prevention, care and support to meet the needs of older people. The core areas where older people need support are:

- In their role as carers for people living with AIDS, and for orphans and vulnerable children.
- Access to information on the risk of HIV/AIDS, so that they can protect themselves and others against infection.
- Emotional support to help older people deal with the stigma and discrimination that result from having a child or grandchild with HIV/AIDS.
- Psychosocial coping mechanisms to deal with stress, illness and grief.
- Treatment and support for older people with HIV/AIDS.

Feeling the strain: older caregivers and HIV/AIDS

The primary impact of HIV/AIDS on older people in most AIDS-affected countries is in their role as caregivers to people living with AIDS, who in most cases are adult sons and daughters, and children orphaned or otherwise made vulnerable by AIDS. In Sub-Saharan Africa, about 13 million children have lost one or both parents to HIV/AIDS. In Namibia, South Africa, Botswana, Malawi, Tanzania and Zimbabwe, up to 60% of orphaned children live in grandparent-headed households. Many grandparents care for several grandchildren. Women are more likely than men to be the main carers.

Research in Africa and Asia points to a wide range of problems experienced by older carers. These include

exhaustion, financial hardship, grief and emotional upheaval, lack of knowledge and resources for dealing with adult children with HIV, conflicts with grandchildren, social stigma and discrimination and exclusion from information and support services. The strain of caring for people living with AIDS in the final stages of the illness can also be harrowing and tiring, and takes its toll on older people's own health. A study in Cambodia found that many older people in HIV-affected households suffer poor physical and mental health through increased care-giving workloads. Older parents can also suffer feelings of blame, shame and guilt about their children's situation.

Caring responsibilities also exact economic costs. In Tanzania, many older people report having to sell assets (including land and property) or using savings in order to support the people under their care. The lack of free treatment and affordable, accessible medicines adds to caregivers' financial burdens. Older carers also meet the costs of family survival, including the provision of food and shelter. They take their responsibilities very seriously, and often get distressed about not being able to provide enough food and clothes, or being able to meet children's educational needs. Even if older carers manage to find funds for school fees, they are often unable to provide other essential items such as uniforms, books and transport costs to and from school. The financial burden on older people who care for grandchildren is, in short, immense.

HIV/AIDS prevention and awareness campaigns almost exclusively target younger people and adolescents

Older people are at risk of infection

HIV/AIDS prevention and awareness campaigns almost exclusively target younger people and adolescents, despite the fact that older people are still sexually active. Analysis of infection data collected in Uganda between 1992 and 2002 found that the over-50s made up 4.6% of those who attended voluntary testing and counselling centres. Of these, one in five tested HIV-positive (23.9% of women and 18% of men).¹ By and large, the risk of infection and spread of HIV among older age groups goes undetected and unreported. Literacy levels among older people are low, limiting their access to what written information is available. Older women carers taking part in a study in Tanzania identified their main sources of information as peer educators, home care visitors and the radio. In Cambodia, older people identified television, radio and neighbours, especially young adults, as their primary source of information on HIV/AIDS.

¹ For more information, contact Fiona Clark, Policy Officer, HelpAge International. Email: f.clark@helpage.org.

Targeting HIV/AIDS programmes for older people

The key to supporting the numerous challenges older people face as a result of the HIV/AIDS epidemic lies in interventions at community level, and an intergenerational approach. To be effective, these require collaboration between governments, international agencies and NGOs. HelpAge International works with community-based organisations such as older people's associations to identify and support affected and infected older people at a grassroots level. Programmes in countries including Kenya, Mozambique, South Africa, Sudan, Thailand, Uganda and Zimbabwe combine income generation with support and advice to older carers of people living with HIV/AIDS, and of orphans and vulnerable children.

In Cambodia, HelpAge International is running a pilot project in 15 villages to support older people's associations to help families affected by HIV/AIDS. Members are selected by their communities to become HIV/AIDS volunteers. These volunteers visit families affected by HIV/AIDS, bringing food, money and medical items, such as oral rehydration salts, gloves, cotton wool and anti-fungal soaps. Money goes towards the cost of funerals and medical care, and clothes for children to help them stay in school. The volunteers also help with practical tasks, and provide emotional support. Volunteers also raise awareness about HIV/AIDS, and work to reduce the stigma associated with it.²

HelpAge International's experience shows that, once older people are informed and included in HIV/AIDS prevention projects, they are keen to be part of efforts to save their families and communities. Programmes training and supporting older people as 'listeners' and 'counsellors' are proving effective. In Juba, Sudan, HelpAge International has developed and strengthened an outreach system of older people's committees, health promoters and social workers, which ensures that the most vulnerable are identified and supported.³ Utilising the important skills and status of older people, the programme provides them with the tools to become community educators, raising awareness about HIV/AIDS through the production of radio programmes, dramas, booklets and posters. HIV/AIDS education programmes in South Africa are encouraging dialogue between conventional health professionals and traditional healers, making it easier for older people to obtain appropriate health services.

Social protection for the most vulnerable

In order to target interventions successfully at grandparent-headed households, it is important to look at the resources they have, and provide them with adequate financial support. Some countries in Africa are implementing or developing social protection mechanisms for older people, orphaned children and other vulnerable groups. In Botswana, Namibia and South Africa, for example, a pension is

² For more information, contact Dim Vy, Programme Manager, HelpAge International, PO Box 525, Phnom Penh, Cambodia. Email: haicambtb@online.com.kh.

³ For more information, contact HelpAge International c/o Acropole Hotel, PO Box 48, Khartoum 2, Sudan. Email: haitz@africaonline.co.

provided for older people, which helps older carers of orphans to cope with the financial burden they bear.

The government of Zambia, funded by the German development agency GTZ, has launched a two-year cash transfer scheme targeting the poorest households, but including a high number of households headed by older people and affected by AIDS, and with orphans. Each household receives \$6.20 a month. Most of this is spent on food, clothes, soap and farming inputs. Sixty per cent of members of beneficiary households are children under 19 years of age. School attendance and nutrition among children have improved since the introduction of the cash transfer. In South Africa, foster-care and child-support grants are available for age-eligible co-resident grandchildren. However, take-up rates on these grants have been low, partly because general awareness of them is poor. As part of a three-year project with the Muthande Society for the Aged (MUSA) in the KwaZulu-Natal metropolitan region of Durban, older people receive advice on access to social welfare entitlements.

Community credit committees run by older people and community members in Tete Province, Mozambique, have helped support over 300 older carers and young people, two-thirds of them women. Funds have been used to set up small businesses, including trade in small animals, used clothes, traditional beer-making and producing local foods. The credit committee allocates funds to projects that benefit the community. Interest on the funds is used to support the community's older and most vulnerable households. Most of the older carers who received funds bought school items for their orphans and basic food and clothes for the household, and paid hospital or treatment costs.

Conclusion

To summarise, older people affected by HIV/AIDS need the following targeted support:

Emotional support

- to help a child cope with the death of their parents;
- to cope with their own grief at the death of their son, daughter or grandchild; and
- day-to-day support to prevent isolation.

HIV/AIDS education

- about how HIV is transmitted and prevented;
- recognising symptoms of HIV in a family member;
- how to care for a family member with HIV (including treating common infections); and

- access to HIV/AIDS support groups and services.

Economic support

- to meet household costs including food and healthcare;
- to provide education and clothing for grandchildren;
- for treatment and travel to clinics to care for sick children; and
- to compensate for loss of earnings or family support.

Practical and legal support

- support with parenting;
- acceptance by the authorities as adoptive or foster parents;
- access to information on nutrition and immunisation; and
- advocacy support, such as protecting the rights of widows and children to inherit land.

Faith Mall is Communications Officer Media at HelpAge International. Her email address is: press@helpage.org.

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Disasters and Development Policy Review special issues on cash transfers

A call for papers

There is growing interest in the role of cash transfers in social protection, and in the role of cash as an alternative or complement to in-kind assistance in emergencies. Experience with cash-based approaches in emergency and development contexts is also growing. To reflect this growing interest and experience, and to mark ODI's enhanced research interest in this field, *Development Policy Review* and *Disasters* will publish joint special issues on cash transfers in June 2006. *DPR* will focus on the use of cash transfers in development, and *Disasters* will explore their use in emergencies. The issues will be jointly edited, and the links between emergency and development contexts drawn out.

Authors are encouraged to submit a one-page abstract for consideration by a peer review panel. The deadline for receiving abstracts is 31 October 2005. All manuscripts will again be considered by a peer review panel. Contact Paul Harvey at p.harvey@odi.org.uk for more information.

Education in post-conflict settings: lessons from a pilot course in Liberia

Christopher Castle, Katharine Elder, Pamela Baxter and Christophe Cornu, UNESCO

Conflict can have a devastating impact on children's education. Formal and non-formal education structures are corroded, communities displaced and fragmented and educational inputs threatened. Maintaining a sufficient educational corps, recruiting educators and ensuring that they are properly trained and remunerated becomes a challenge; physical structures may also be affected, and may not be safe environments for learning. This combination of factors may significantly reduce the quality of education offered to learners.

In rebuilding education systems in a post-conflict situation, there is a unique opportunity to approach the process in an integrated manner. Rebuilding is typically undertaken in a piecemeal fashion, but educators should seize the opportunity of reconstruction to develop, revise and improve educational components in a holistic manner. In an effort to promote quality education and provide a forum for dialogue on these issues, the UN Educational, Scientific and Cultural Organisation (UNESCO) piloted a course in Monrovia, Liberia, in January–February 2005. This article describes the structure of the course, the rationale behind it, the challenges encountered during implementation and its potential future application in other post-conflict situations.

Course structure and participants

When discussing educational needs, it is critical to remember that learning takes place in both formal and non-formal learning environments, and that both environments must be conducive to the learner's needs. In times of conflict, non-formal learning systems may take on new significance as traditional formal schooling structures weaken. In planning the course, the primary objective of the design team was to promote the concept of quality education, and to develop skills among participants whereby quality education and universal rights-based values could be reflected in their work as educators.

learning takes place in both formal and non-formal learning environments

The course involved over 30 participants, almost half of whom came from the Liberian Ministry of Education, the remainder from NGOs working in the education sector and in humanitarian relief. A paper drafted by the Division for the Promotion of Quality Education at UNESCO, *Quality Education and HIV/AIDS*, and the Interagency Peace Education Programme, were used as the foundation for the course. Six modules were developed, as well as two 'case study approaches' (on HIV/AIDS education and peace

education), which presented the group with the opportunity to analyse the process and structure of a rights-based approach to education.

The course opened with discussion of how learning takes place, and what elements must be present to ensure effective learning. Participants analysed a learning experience of personal significance, then explored how the process had transpired, including factors such as what they learned, how they learned and from whom they learned. Through this exercise, the group arrived at the conclusion that, in order for the learning process to be effective, learning must be active, the environment must be conducive to learning and the educator must acknowledge and respond to the learner's needs. Educational theorists such as Benjamin Bloom, Abraham Maslow and Lawrence Kohlberg were discussed in relation to ensuring a holistic approach (cognitive, affective, ethical and physical), and exercises were conducted on the application of these methods. Through these methods, the group was able to move towards defining a system of learning, and the values that good-quality education should reflect and promote.

In a quality education system, learning should always be at the centre. If systems of education focus on 'educating' or 'schooling' rather than 'learning', they neglect the needs of the learner and are not effectively responding to the environment in which the learner lives, the challenges the learner faces, the context of their lives and other essential factors that encourage or hinder learning. Within the system of learning, the various components are linked through their potential to affect one another and alter the environment in which learning takes place. In the context of Liberia, the group discussed how the situation in their country could affect the learning system, and what factors could enhance or hinder the implementation of a quality education approach. Many of the constraints listed by the group included specific obstacles faced by teachers within the country, such as a lack of training opportunities and support for teachers. However, participants also recognised that there were enhancing factors, and this encouraged the group to explore opportunities for utilising a quality education approach.

Quality education is not only about cognitive development (basic numeracy or literacy): it should also include the development of a sound values system that reflects universal values and human rights. To illustrate this idea, and to provide participants with an opportunity to think through what this means to them and their work, two exercises were developed. In small group work, the first activity encouraged participants to discuss the values that were particularly relevant to Liberia. Those listed included equality, respect for others, tolerance and honesty. This reinforced the idea that even values consid-



The ‘values die’

ered culturally specific are, in fact, universal. An exercise was developed to better illustrate the concept of values in education, involving a ‘values die’ with each face of the die representing a value, and a floor chart representing the learning system. The idea was to explore how the values could be developed and reflected in the education system. For example, if the die showed ‘tolerance’ and landed on ‘teaching’, the participants were asked for a quick example of how tolerance could be developed and reflected in the teaching process. This was followed later in the course with small group work to develop strategies reflecting the values. Both these exercises were well received by the group, and allowed the participants to engage in brainstorming about methods that could be used in their work, illustrating how values can and should be reflected and promoted throughout a quality education system.

**rights-based education embeds
human rights in the structure of
the system and the pedagogy,
not just in the content of certain
curricula**

The values defined by the group are intrinsically linked to human rights as embodied in a rights-based education approach. Universal values are defined in the Universal Declaration of Human Rights. Human rights education is typically understood as education *about* human rights. Rights-based education embeds human rights in the structure of the system and the pedagogy, not just in the content of certain curricula. Thus, rights-based education is different from human rights education: a rights-based approach to education is rights *in* education, rather than education *on* rights. Although the principle of a rights-based approach to education is relevant to all education systems, it is particularly important in conflict-affected areas, where people may

have suffered human rights abuses. In these circumstances, rebuilding an education system is the prime opportunity to ingrain these concepts within the structure, helping to safeguard against future abuses.

Although resources may be scarce in post-conflict environments, some pedagogical methods can be employed at little or no cost to reflect quality education. Course participants spent a significant amount of time discussing these teaching methods and techniques, and developing the idea that learning is a participatory act. Learning is most effective when the learner is an active part of the discovery process. Traditional ‘chalk and talk’ methods, though perhaps viewed by educators as a safe way of keeping a class or group under control, do not engage learners as effectively as dialogue between learners and educators. This dialogue requires interactive methods of questioning and listening, where both learners and educators play a critical role in the learning process.

To illustrate these ideas, exercises were conducted to develop an appreciation for active listening and questioning skills. A ‘question step’ activity demonstrated that it is possible to ask questions that assist the learner in reaching the intended learning outcome. A facilitator acted as the learner, and the course participants were asked to help the ‘learner’ to reach the desired learning outcome through a series of questions. Irrelevant questions prompted the ‘learner’ to take a step sideways, thus putting them off track; successful questions that assisted the learner resulted in a step towards the desired learning outcome; and unproductive questions prompted the learner to take a step back. Through this exercise and others, the group had an opportunity to discuss why using a diversity of teaching methods and techniques, coupled with active listening and questioning skills, can result in more effective learning.

A key premise of the course was that the methodology used by the facilitators would be an example of the content presented. The facilitators thus conducted the discussions and exercises in a participatory manner, reflecting the values inherent in a quality education approach. The course was well-received by the participants, and the Minister of Education asked that it be offered for all district and county education officers. Although the course was designed for countries in post-conflict or reconstruction phases, UNESCO believes that it could be applicable to other education settings. The principles of quality education and a rights-based approach to structuring the education system are relevant to all learning systems, and the course has possible future application in diverse settings. In order for quality education to be realised, and a rights-based approach to education institutionalised, stakeholders, educators and learners alike will have to come together and discuss these issues. Although the ‘Planning for Quality Education in Liberia’ course was an initial step in the movement to engage people in dialogue on the necessity and relevance of quality education, much more needs to be done to promote it not only in conflict-affected areas, but also in places with more developed education systems.

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Armed violence against women in Burundi

Edward B. Rackley

While Burundi continues its slow advance towards stability and elections as the country’s civil war winds down, Burundians themselves are experiencing little in the way of a peace dividend. In the aftermath of a decade-long war, rural and urban residents are confronted with high levels of insecurity and violence. The proliferation of small arms is now the greatest threat to civilian security in Burundi; a civilian disarmament programme is under way, but has had little impact. An estimated 80% of households in the capital, Bujumbura, and in the larger provinces possess small arms. For the female population, the consequences are particularly dire.

In late 2004, I led a two-month assessment for UNDP of arms-related violence against women in Burundi. What had the flood of guns, grenades and other light weapons done to female livelihoods, family structures, women’s physical security and reproductive health? Are women predominantly passive victims, or do they play an active role in the violence by smuggling arms, hiding criminals or otherwise abetting armed groups? The assessment took place in eight of Burundi’s 16 provinces, selected on the basis of security, as well as the degree to which arms proliferation had occurred during the war.

The scale of the problem

During the conflict, both government and rebel leaders distributed automatic weapons to civil servants, teachers and other professionals across the country, ostensibly to reinforce civilian self-defence. No official records of these distributions appear to exist. Women we interviewed with connections to the political class told us that these weapons could only be reclaimed when a credible political solution had been found, one that fostered ethnic reconciliation between Hutu and Tutsi. Although politicians and military officials we interviewed in Bujumbura claimed to recognise the need for civilian disarmament, many Burundians regard arms as necessary to protect their homes, and for self-defence. There is widespread distrust

during the conflict, both government and rebel leaders distributed automatic weapons

of the political situation, and tensions from the civil war persist.

Many of the women we spoke to were opposed to civilian disarmament because they felt that arms were essential to domestic security: an insurance policy for the family. As women we interviewed in Cankuzo put it, ‘all the reasons why Burundians keep arms are still there’. The director of a local radio station, whose programming is devoted to reconciliation between ethnic groups, characterised the general feeling: ‘These days’, she said, ‘it’s not that I have a gun to fight in the war, I have a gun to defend myself against theft and banditry’. Unknown assailants had tossed grenades into her home two months earlier.

One of the reasons why the government’s disarmament programme has had little effect is that it offers no incentives to encourage people to hand in their arms. Gun ownership is highly lucrative, as guns are rented or sold to thieves. We were told that, after an armed attack with rented weapons, stolen goods and cash are then shared between the assailant and the gun owner, or the owner is paid a one-off rental fee (\$50 a day is the current rate).

Armed assault in Burundi has created a vicious cycle of gun-related violence. People subjected to armed attack find themselves without recourse to effective legal action, and armed revenge seems the only option. Rape survivors, for instance, may send their brothers to avenge the family reputation by inflicting further violence. In the absence of legal enforcement, perpetrators and avengers operate in a

'no risk' environment. This climate of impunity also obstructs the return of displaced people to their homes. In one IDP camp, in Rutana, women said that they were afraid to return home because the people who had killed their families in 1993 remained unpunished. Within the camp itself, firearms and grenades were said to be common; the women we interviewed told us that their sons had created their own civil defence unit, and were using handmade rifles (known as *mugobore*) to protect camp residents at night.

Armed violence and rape

Of the grave consequences for women of arms and armed violence in Burundi today, sexual violence receives the most attention from donors and humanitarian agencies. Quantifying the scale of rape in Burundi, armed or unarmed, is difficult. In every province we visited, trauma practitioners and rape counsellors emphasised that the number of armed rapes that went unregistered and untreated far surpassed the number that were reported. This has obvious implications for the monitoring and spread of HIV/AIDS, though testing facilities are limited in rural Burundi, making infection rates unknowable.

The majority of women we met claimed that armed robbery was often accompanied by sexual assault. If women or girls are present when farms and homes are attacked and robbed, they are raped. Women we spoke to in Ruyigi reported that armed rape using homemade weapons was frequent in hillside communities. Aggressors are not soldiers or ex-rebels, but known local residents. In a typical scenario, a woman is approached by a man brandishing a *mugobore*; the demand for sex is tacit, the armed threat evident. The victim yields – 'better to be raped than shot' – and then remains silent for fear of reprisal.

While the act of rape itself is not exactly taboo, discussing it openly is. As if to add insult to injury, it is the victim, not the rapist, who bears the onus of blame. Interviewees told us that the prospect of social rejection was more dreadful than the rape itself, as it lasts a lifetime. When found out, rape survivors are castigated, banished or abandoned by their husbands and families. When undesired pregnancies result, offspring are rejected and often abandoned by the mother. Fear of rape-related stigma and banishment can lead women to self-abort. This entails medical complications, including maternal mortality.

Small arms are not the sole enabler of sexual violence in Burundi. An equally important cause, according to trauma counsellors we interviewed in Ruyigi, Gitega, Makamba and Kayanza, is cultural: the diminished status accorded to women in Burundian society. 'In Burundian culture,' one counsellor explained, 'maintaining appearances is more important than confronting realities.' Where gender inequality is the norm in times of peace, periods of violence and social upheaval serve to exacerbate gender discrimination. All women interviewed emphasised that rape had long existed in Burundi and predated the war, but that only in the last five years had the scale of the problem begun to receive public attention. This was due to concerted efforts by local and international NGOs, women's associations and

youth groups to educate and sensitise the population, accompanied by the advent of confidential medical and psychosocial services for rape survivors.

Widowhood and prostitution

Another devastating consequence of armed violence is the high number of widowed mothers in Burundi. Widows suffer particular discrimination under Burundian law, as they cannot inherit property from their dead husbands. With no inheritance rights, widows lose all belongings and property to their late husband's family. Poverty and desperation are the direct result of widowhood. Under the weight of shame and destitution, widows flee with their children and turn to prostitution for survival. This descent is accelerated when the threat of armed attack and rape keeps rural women from working in their fields. Youth groups in Makamba confirmed that widows were regularly chased from their land. Meanwhile, the slide into prostitution for economic survival in turn confirms society's preconception of widows as promiscuous. The daughters of widowed women tend to drop out of school or do not attend at all. They marry prematurely, often as a second or third wife, because there is too much poverty at home.

'all the reasons why Burundians keep arms are still there'

Widows in Kayogoro camp, Makamba province, justified prostitution and 'concubinage' because it improved their security. Better security is one aim of prostitution, because the lack of any bond with local men can leave a woman susceptible to sexual assault. Prostitution is seen as safer than remaining alone, exposed and vulnerable to abuse and violence by unknown delinquents, armed gangs and bandits. One widow, the youngest of the group, spoke candidly about her 'vagabondage sexuel', or sexual vagrancy. She explained that there had been no other way to survive after losing her husband and children to the war. The woman fled to Kayanza town and took a rented room paid for by a friend. At that time, prostitution was the only way to make ends meet. She is now a member of a women's association that supports street children in Kayanza.

The humanitarian response

Listening to beneficiaries is essential to successful humanitarian programming, particularly when implementing community-led projects. When asked about breaking the causal connection between arms proliferation and violence against women, many women stated that 'Burundian culture' would first have to change. What does this mean for humanitarian agencies?

While both men and women acknowledge the negative impact of arms proliferation on civilian well-being, livelihoods and the social fabric, there remains an important gender gap in perceptions of arms possession. According to many women, ongoing insecurity and armed violence reinforce the male perception that arms are essential to

personal safety and domestic self-protection. Women described feeling hostage to this logic: despite a fear of arms in the household, for instance, women do not dare denounce them. None of this excludes humanitarian agencies from helping Burundians find viable solutions to this problem.

Across the country, women acknowledged that, in the last five years, humanitarian actors had contributed enormously to addressing the nexus of small arms and sexual and gender-based violence. International NGOs have formed partnerships with local groups to create an inter-agency referral system, enabling victims to benefit from medical, legal and psychosocial assistance. Documentation and advocacy work has raised the profile of the problem, and has encouraged many more women to seek medical assistance and pursue justice than was the case five years ago. However, despite these important advances the root causes of armed and sexual violence remain unaddressed. Arms proliferation, banditry and rape are symptomatic of a deeper malaise, widely recognised by Burundians.

Even if national reconciliation is achieved, ending arms-related violence against women is impossible without addressing poverty. Arms and armed violence are the expression and enabler of extreme poverty, because they create and perpetuate a climate of constant insecurity. This insecurity is the greatest obstacle to development. As demobilisation, disarmament and reintegration and the political peace process continue, humanitarian actors must consider their contribution to the reconstruction and rehabilitation of Burundi, particularly its rural economy and education sector. Programming is needed that is attuned not only to Burundians' physical survival, but also, equally essential, to their economic survival. Education for girls and the poor is also a prerequisite to creating alternatives to arms, armed violence, sexual violence and prostitution.

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No relief: surveying the effects of gun violence on aid workers

Robert Muggah, Small Arms Survey, with Cate Buchanan, Centre for Humanitarian Dialogue

Humanitarian and development personnel faced an unusual surge in intentional violence and intimidation during 2004. More than 100 UN civilian and NGO personnel were killed in violence around the world between July 2003 and July 2004. Although the absence of reliable data on intentional violence precludes a precise reading of its many dimensions, the consequences of gun violence on the safety and security of relief workers, and on their access to civilians, have been profound. Attesting to the seriousness of this issue, the UN High Level Panel on Threats, Challenges and Change strongly condemned the increasing risks encountered by relief and development workers, and recommended the establishment of a new Directorate of Security.¹

¹ UN 2004: 74.

The Geneva-based Small Arms Survey and Centre for Humanitarian Dialogue have documented the multi-faceted effects of armed violence on aid workers since 2001. Between 2003 and 2005, these organisations conducted the largest victimisation survey of humanitarian and development workers ever undertaken. Entitled *No Relief*, the goals of the survey were to highlight the scale and distribution of weapons in areas where aid agencies work; review the impact of arms availability on the quality and quantity of relief and development assistance; and document the human cost of gun violence on civilians, including aid workers.

Key findings and main observations

The survey covered more than 2,000 respondents from over 17 international agencies in 96 countries and

territories.² Almost one in five respondents reported being involved in a security incident in the previous six months.³ While much is often made of the deliberate targeting of aid workers by insurgents and warring factions, by far the biggest risk is from criminal violence, such as armed assault, armed robbery, intimidation and rape at gunpoint. The Occupied Palestinian Territories (OPT), Uganda and Iraq emerge as among the most dangerous places in the world for aid work. Other countries of concern include Côte d'Ivoire, the Democratic Republic of Congo (DRC), Guinea, Kenya and Nepal.

Armed violence prevents humanitarian and development workers from accessing beneficiaries. In fact, there is a direct correlation between the perceived availability of small arms and the presence of armed violence and the access of aid workers to beneficiaries.⁴ More than 20% of respondents reported that a quarter or more of their target groups were rendered inaccessible in the previous six months due to the presence of routine armed threats. At least one in three respondents reported the suspension of an operation during the previous six months due to armed conflict; one in four reported that they had had an operation suspended in response to armed criminality.

² Participating agencies included: CARE, Concern, GTZ, the International Federation of the Red Cross (IFRC), International Rescue Committee (IRC), Médecins du Monde (MdM), Oxfam-GB, Registered Engineers for Disaster Relief (RedR), Save the Children, World Vision, the International Organisation for Migration (IOM), the Organisation for the Coordination of Humanitarian Affairs (OCHA), the United Nations Development Programme (UNDP), the United Nations High Commissioner for Refugees (UNHCR), the United Nations Children Fund (UNICEF), the United Nations Security Co-ordinator (UNSEC-OORD) and the World Food Programme (WFP).

³ Victimisation rates in Afghanistan and Angola are especially high as compared to the global baseline. In both Afghanistan and Angola, the proportion of national staff (as opposed to expatriates) who reported that they had personally been victimized is higher still. *No Relief* finds that national respondents from Afghanistan are three times more likely than their expatriate counterparts to report having been personally victimised in the past six months.

⁴ These three outcomes – availability of weapons, armed violence, and access to beneficiaries – are composite dependent variables. They are measured according to responses from multiple questions designed to test different types of risks. See Buchanan and Muggah (2005).



A Nigerian rebel soldier in the Niger Delta,
September 2004

Aid agencies are increasingly turning to armed guards to protect themselves against violence. There appears to have been a significant increase in the use of armed guards by participating agencies, with one in three respondents reporting the use of guards in 2004 (as compared to one in five in 2003). It appears that, along with the promotion of acceptance,⁵ the hardening of targets,⁶ particularly the contracting of private security guards, is a common response to mitigating the risks of intentional violence.

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the reported levels of violence in a given country.

Taking action

Most practitioners are resigned to the fact that armed violence will be a persistent feature of the humanitarian and development landscape for years to come. In response, relief agencies are beginning to adopt innovative advocacy strategies, appropriate security guidelines, improvements in safety and security training and strengthened cooperation in intelligence-gathering and intelligence-sharing. A solid evidence base should form the cornerstone of any intervention.

Formulaic top-down security strategies that rely exclusively on *hardening targets*, whether through the introduction of higher fences or outlays on private security, may not meaningfully alter how workers *feel* about their own security. More can and must be done. At the very least, donors,

⁵ OCHA (2004) defines acceptance as being 'based on the premise that local communities and power structures will allow and even support humanitarian activities if these activities are well understood. The acceptance approach requires that those in a position to undermine humanitarian work must see it to be consistent and believe it to be independent'.

⁶ The concept of hardening the target refers to methods of increasing the physical security of aid workers. This can include restrictions on movement, the use of perimeter fences, and the screening of visitors. It can also include the hiring of private security guards to dissuade would-be aggressors. In this context, however, it bears little relation to the protection of civilians or 'humanitarian protection'.

there is a direct correlation between the perceived availability of small arms and the presence of armed violence and the access of aid workers to beneficiaries

policy-makers and senior managers must acknowledge how violence is perceived in areas where their employees work, how the prevalence and misuse of guns inhibit access and protection and how, by focusing on behaviour and perceptions, guidelines and codes of conduct can enhance protection on the ground.

The opinions of aid workers are an invaluable and cost-effective resource in shaping the policy and practice of humanitarian and development agencies. While contiguous data on fatal and non-fatal injuries is vital, information on the subjective interpretation of insecurity, on the distribution of small arms and on the behavioural responses of staff to armed violence should inform the design and revision of threat assessments, security plans and programming efforts. Aid workers' views must be channelled upwards in order to guide policy development.

Precise, comparable and reliable information is a precondition for the design of appropriate and robust responses. Consultancy reports and short-term assessments cannot replace rigorous and regular internal data collection efforts. Routine data collection on the perceptions of aid workers can fill an important gap. Simple and low-cost surveys, combining measurable indicators with semi-structured questions, can generate useful information for shaping interventions.⁷ If improvements in security management are to be realised, agencies must begin to collect baseline information. In fact, *No Relief* includes a basic template and methodology for agencies' own annual or biennial victimisation surveys.

there is a need for demand-driven and responsive security training, trauma counselling and victim assistance programmes

Humanitarian and development agencies also need to become more proactive in international and national debates associated with the reduction of armed violence. The survey documents the many ways that armed violence

⁷ An example of an aid worker victimisation questionnaire is located at www.hdcentre.org or www.smallarmssurvey.org. Consult the annex of Buchanan and Muggah (2005) for the full version.

undermine the efforts of humanitarian and development agencies. To date, few agencies have made their voices heard in disarmament and arms control fora. Agencies could adopt a more assertive stance in influencing and shaping UN negotiations on the reform of national firearms legislation, the reduction of surplus or excess stockpiles, community-based approaches to arms reduction, restricting the trade and transfer of arms to non-state armed groups and disarmament, demobilisation and reintegration (DDR) efforts.⁸

A basic finding is the importance of redressing the disparity between expatriate and national security training. National personnel are as exposed to gun violence as expatriates. *No Relief* also registers the persistent and unequal access to security training between both categories. It is incumbent upon agencies to carefully consider these imbalances and the reasons for their persistence; further, they should identify strategies for rectifying and improving the quantity and quality of security training available to all staff.

Finally, there is a need for demand-driven and responsive security training, trauma counselling and victim assistance programmes. While many agencies, particularly those within the UN system, have introduced centralised and mandatory security training regimes, efforts should be made to test their effectiveness, breadth and appropriateness. Ultimately, relief agencies need to develop security policies that acknowledge how people interpret and respond to their security environment – particularly in relation to performance and the achievement of mandated objectives. In particular, increased attention to post-incident debriefing and trauma counselling services is encouraged. Thus, a priority should be attached to the elaboration of responsive security management policies that speak to local realities.⁹ Although potentially instructive, top-down and formulaic guidelines and protocols administered from headquarters may not be appropriate to the field. Security procedures should be regularly updated to match the heterogeneous conditions in which humanitarian and development aid workers find themselves.

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⁸ *No Relief* also calls on agencies to increase their awareness of civilian gun laws and become engaged in strengthening them. Where domestic firearms legislation requires strengthening and updating, agencies could be instrumental in facilitating experts consultations, identifying pathways to reform or harmonisation, and supporting violence prevention initiatives already underway.

⁹ Thus, *No Relief* also calls on donors and senior managers to provide support for coordinated NGO security initiatives at the grassroots. It is important that multilateral and bilateral donors assist NGOs in developing coordinated security initiatives and encouraging greater investment in effective monitoring, evaluation, and rapid reaction mechanisms.

tarian Dialogue and 17 humanitarian and development agencies. The final report, *No Relief: Surveying the Effects of Gun Violence on Humanitarian and Development*

Personnel by Robert Muggah and Cate Buchanan, is available at www.smallarmssurvey.org and www.hdcentre.org/index.php?aid=51.

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Internal displacement: the future of the Collaborative Response system

Jens-Hagen Eschenbächer, Global IDP Project

The international community has largely failed to effectively address the worldwide internal displacement crisis. In all, some 25 million people in 50 countries are affected by conflict-induced internal displacement. Most do not receive adequate humanitarian assistance from their governments, nor are they sufficiently protected from violence and human rights abuse. The Global IDP Project estimates that three out of every four IDPs, more than 18 million people, cannot count on the authorities in their country for the provision of adequate assistance. In addition to the direct violence that often accompanies displacement, IDPs appear to be significantly more vulnerable to malnutrition and disease than local residents or other war-affected people. They generally have no access to agricultural land, and only limited opportunities to earn money for food and medical care. Many IDPs are forced to live as second-class citizens, facing discrimination, restrictions on their freedom of movement and their political rights, and difficulties in accessing personal documents, social services and benefits.

This article examines some of the weaknesses of the current response to the IDP crisis, and explores possibilities for improvements. It argues that the current arrangement, known as Collaborative Response, albeit far from ideal, is the most viable in view of current political realities, and still has a great potential for ensuring a systematic and comprehensive international response to the protection and assistance needs of IDPs.

some 25 million people in 50 countries are affected by conflict-induced internal displacement

A weak response

National governments have the primary responsibility for protecting and assisting internally displaced people on their territory, but they often do not have the will or the

capacity to fulfil this obligation. Since the early 1990s, the international community has taken on responsibility for addressing the plight of the displaced. However, the approach chosen by the UN system – known as ‘Collaborative Response’ – has been fraught with problems. The Collaborative Response system requires all relevant agencies present in an internal displacement situation to work together under the coordination of the UN resident and/or humanitarian coordinator to address the assistance and protection needs of IDPs in a systematic and comprehensive way. As focal point for IDP issues and chair of the Inter-Agency Standing Committee (IASC), the UN Emergency Relief Coordinator (ERC) has overall responsibility for ensuring that the system works.

There have been significant problems with the implementation of the Collaborative Response. The Global IDP Project’s *Global Overview 2004* showed that, in 29 out of 49 countries, there was no UN strategy to address IDP issues. In the other 20 there was a more coordinated and systematic response, but this often existed only on paper. In 14 countries, the UN was not involved at all in providing targeted assistance to IDPs.

Reacting to growing concerns over the deficiencies of the international response, the UN and other organisations revised and expanded their IDP policy in September 2004. In addition, the Emergency Relief Coordinator, Jan Egeland, stepped up efforts to make internal displacement a priority within the UN system. He strengthened the UN’s Inter-Agency Internal Displacement Division, appointing a senior UNHCR official as its director and focusing its work on a few selected priority countries. UNHCR has also emphasised that it will intervene in IDP situations where these are ‘linked or similar to refugee/returnee situations, and where there is a need for intervention’.¹ Given that the agency has been criticised for being ‘uncertain, inconsistent and unpredictable’ with regard to IDPs,² this indicates an important change in policy, but still needs to be confirmed by the new High Commissioner.

Making the Collaborative Response work

At the same time, discussions have continued on possible alternatives to the Collaborative Response system. Proposals most often cited include creating a new IDP agency within the UN; formally expanding the mandate of



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An IDP settlement in Puntland

UNHCR or another agency to cover IDPs; and designating a lead agency for each affected country.

While there are good reasons to be critical of the implementation of Collaborative Response, it would be premature to abandon it so soon after the adoption of the new inter-agency IDP policy package. Rather, serious efforts should be made to fix the system’s structural deficiencies. For all its problems, the Collaborative Response offers a number of advantages over alternative models. In particular, it allows the international community to:

- respond flexibly to the different phases and situations of displacement;
- mobilise the resources and expertise of a wide range of actors, ensuring that the multi-sectoral challenge of internal displacement is addressed in a multi-sectoral way; and
- systematically involve non-governmental organisations in the international response.

Alternative models appear to be less viable. There is strong political resistance by a number of states (and some UN agencies) to creating a new agency or expanding the mandate of an existing one to cover all situations of internal displacement. Given the sovereignty issues that are at stake, this resistance is unlikely to be overcome in the near future. The sheer scope of the global internal displacement crisis goes far beyond the capacity and expertise of a single agency, and thus necessarily requires a broader inter-agency effort. This does not preclude nationwide, regional or sectoral lead agency arrangements, provided that the procedures agreed in the inter-agency IDP policy are adhered to. With the stronger involvement of UNHCR in IDP situations, such lead agency arrangements may become increasingly relevant.

¹ Statement by Wendy Chamberlin, Acting UN High Commissioner for Refugees, to the 61st Session of the UN Commission on Human Rights, Geneva, 17 March 2005.

² *Consistent and Predictable Responses to IDPs: A Review of UNHCR’s Decision-Making Processes*, UNHCR, March 2005.

To say that the Collaborative Response is the best system we have is not to argue that its weaknesses should not be addressed. To have a tangible impact on the ground, the following challenges need to be looked at urgently.

Improving accountability

Lack of accountability – one of the main weaknesses of the humanitarian response system in general – has a particularly negative impact on the functioning of the Collaborative Response. The inter-agency IDP policy clearly assigns responsibility for developing and implementing a comprehensive response to IDP situations to the UN's in-country humanitarian coordinators or, where this position does not exist, to resident coordinators. However, many resident/humanitarian coordinators have not fully assumed this responsibility, or are not aware of it. Also, there are no specific reporting mechanisms in place with regard to implementing the IDP policy, and the general reporting line between humanitarian coordinators and the Emergency Relief Coordinator is often weak. As a result, there are generally no consequences for failure to comply with the policy.

As IDP focal point within the UN system, the Emergency Relief Coordinator should be asked to report to the IASC on the progress made in implementing the September 2004 policy package. Similarly, resident and humanitarian coordinators should be required by their terms of reference to regularly report to the ERC on their efforts to develop and implement an IDP action plan. The action plan should be developed in consultation with NGOs, and should include clearly defined benchmarks against which progress can be measured. Donors should play a stronger role in monitoring the implementation of action plans.

Strengthening leadership and capacity

While resident/humanitarian coordinators are assigned a key role in the response system at the country level, they often are not fully aware of their IDP-related responsibilities, do not have the necessary background and capacity to carry out this function adequately, or are limited in their interest in IDP issues, in particular where IDP protection conflicts with their other responsibilities. In many emergencies, the resident coordinator, often the head of the UNDP country office, is designated humanitarian coordinator, although he or she may have little or no humanitarian background, and their agency agenda may not be consistent with assuming a proactive role with regard to IDP issues.

Steps should therefore be taken to ensure that only candidates with a strong humanitarian background are appointed to the position of humanitarian coordinator, and that all humanitarian and resident coordinators are properly trained and equipped to deal with IDP situations, during an emergency and in the post-emergency phase. As a rule, humanitarian coordinators should be supported by a long-term senior IDP adviser. It is for consideration whether emergency funds should be made available to enable humanitarian coordinators and country teams to respond quickly to emergency situations.

Enhancing agency commitment

Although agencies have formally signed up to the Collaborative Response, in practice commitment to genuine collaboration is often undermined by competition for influence, visibility and funding. In addition, agencies on the ground may not yet be fully aware of the September 2004 policy. Citing budgetary constraints and other obstacles, agencies are reluctant to take on IDP-related responsibilities not strictly falling under their core mandates. This introduces a measure of unpredictability into the process, and results in a pick-and-choose approach, leading to institutional deadlock, gaps and delays.

commitment to genuine collaboration is often undermined by competition for influence, visibility and funding

Agencies should formally integrate the new policy package into their internal policy and operational documents, and ensure that all relevant field personnel are familiar with the policy. Relevant agencies should clarify their policies with regard to their involvement in addressing situations of internal displacement so as to ensure predictability in their responses.

Mobilising donor support

Although most donor governments have committed themselves publicly to the Collaborative Response, several donors are reluctant to put their full weight behind it. Donors rarely provide political backing for coordination mechanisms, or hold agencies accountable for uncooperative behaviour. As a recent evaluation documented, donors even undermine coordination efforts through some of their funding practices.³ Inconsistent messages from donors to agencies with regard to the level of involvement on IDP issues has a similarly negative effect, as demonstrated by the example of UNHCR.

All donors should develop policy documents highlighting the vulnerabilities and specific protection and assistance needs many IDPs have. Such policies should also include a clear commitment to supporting IDP-related coordination mechanisms. Donors should ensure that these commitments are actually translated into political backing for cooperation at the global and country level, including by using their influence as members of agencies' governing boards.

Conclusion

Over the past few years, a considerable amount of time and resources have been invested in analysing the international response to internal displacement and developing means to improve it, including the new inter-agency policy package. The UN system should now be given a

³ Support to Internally Displaced Persons, Learning from Evaluations, summary version, SIDA, 2005, pp. 13–14.

chance to implement the policy package, which has the potential to make a real difference in the field. However, considering the devastating effects of the international community's failure to adequately respond to the worldwide internal displacement crisis, the necessary improvements need to go beyond cosmetic changes to remedy the structural deficiencies still crippling the response system.

To be successful, this requires a full commitment by all actors involved.

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Towards a new model for post-emergency refugee assistance

Jeremy Konyndyk, American Refugee Committee, Guinea

In many settings around the world, refugee assistance organisations working in situations of protracted displacement continue to provide emergency-level services long after the refugee population stabilises. These services are often far beyond what is available to the host population, and better than what the refugees will enjoy at home when they eventually repatriate. Meanwhile, few efforts are made to enable refugees to support themselves and develop self-sustaining livelihoods. This undermines the refugees' livelihood skills, makes repatriation more difficult, and increases tensions with the host communities. Drawing on Guinea as an example, this article argues that humanitarian actors should develop a better transitional model for refugee assistance in situations that move from an emergency phase into protracted displacement.¹

Emergencies and long-term displacement – the traditional assistance model

In an emergency situation, refugees typically arrive in the country of asylum with little more than the clothes on their backs and whatever professional skills they might have. Most are extremely vulnerable, and neither practically nor psychologically capable of supporting themselves in the immediate term. During this phase, humanitarian actors seek to address the refugees' most urgent needs – food,

shelter, health care and water and sanitation. A little later, education, skills training, psychosocial support and other services are added into the mix. Given the refugees' initial vulnerability, all services are provided free of charge, and require little or no contribution from the recipients.

In the longer term, levels of vulnerability decrease. Depending on the situation in the host country, some refugees may find independent employment inside or outside the camps. Others sell food and non-food items and other small products to raise supplementary income, and many find jobs with the NGOs that work in the camps. In Guinea, a moderately active economy has developed in the camps. However, humanitarian actors often disregard this economic context and its implications for effective assistance tactics. Apart from a few NGOs (including the American Refugee Committee) implementing micro-enterprise development activities, little attention is paid to fostering the economic self-sufficiency (or lack thereof) of the refugees. In Guinea, humanitarian actors have continued to provide emergency-level services, which are free and are premised on an extreme level of vulnerability, long after the level of vulnerability of the camp's inhabitants has stabilised.

This is admittedly a simplistic outline of the traditional assistance model, and in practice a range of variations are present in different protracted refugee situations. Nonetheless, it seems clear that refugee assistance in many

¹ For the purposes of this article, 'protracted displacement' means a period of displacement lasting more than a year.



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An ARC-supported market in Laine camp, Guinea

home communities will be a long and difficult process. Liberian refugees repatriating from Guinea can expect to find minimal public services, education and health care at home. While security is often cited by the refugees as a reason for staying, the example of the Sierra Leonean repatriation from Guinea shows that service provision in the camps is a major factor. Sierra Leonean refugees did not finish repatriating until mid-2004 – several years after security had been thoroughly returned to that country. The key factor in convincing the final 15,000 or so to return was the impending reduction of services. Given the choice between returning home to face difficult economic conditions, or staying in the camps where needs are provided for, many Liberian refugees are electing to stay.

contexts remains fundamentally premised on the external provision of services to meet refugee needs, rather than on enabling refugees to meet their own needs. Lacking a developed model for the transition out of the emergency phase in a protracted refugee situation, it remains stuck in ‘emergency mode’, even over the longer term.

Problems with the traditional assistance model

There are multiple problems with the traditional assistance model. First, it undermines the long-term goal of asylum: repatriation. The sustained provision of free services after the emergency phase – once many refugees have the capacity and the desire to support themselves – erodes refugees’ livelihoods mechanisms. Refugees adapt to receiving free food, medical care, education, skills training and a variety of other free services. There is little call on them to use their job skills, and over time these unused skills deteriorate and are forgotten. The habits of functioning in normal economic conditions – where food, health care, education and other things all have real costs – are lost. This makes eventual reintegration into home communities very difficult, as refugees must adapt from a situation of near-total economic dependency to one of near-total self-reliance.

the sustained provision of free services after the emergency phase erodes refugees’ livelihoods mechanisms

Second, high levels of assistance provide a strong disincentive to repatriate. Refugees generally face repatriation to a post-conflict situation in which the rehabilitation of their

Though understandable, this is problematic. Asylum is fundamentally a protective measure – international refugee law is intended to give asylum to those who have a legitimate fear of persecution or of being caught up in a situation of generalised violence. In either case, once the war ends and security is restored in the home country, there is no longer a strong *protection* argument as to why the refugees continue to require asylum. If a large part of the reason for not returning is that economic conditions are difficult and the home country cannot provide adequate social services, then the basis for asylum is much harder to justify – particularly when the hosting country also has extensive economic problems. The idea that refugees can wait to return until their villages are rehabilitated can also harm their home communities by reducing the amount of reconstruction aid they receive. In a post-conflict rehabilitation context, aid is not generally delivered to abandoned villages; rather, it is directed to the areas where people are returning in the highest numbers.

Third, the traditional model of refugee assistance largely ignores the local host community. While some NGOs succeed in raising funds to implement a few side projects in host communities, these are often inferior in scope and scale to the projects carried out for refugees. In Guinea, for example, there is a fundamental inequity between the quality of services available to the two populations. While refugees receive extensive support from humanitarian agencies, impoverished Guineans in nearby villages have little food, low-quality health care and under-resourced schools. This has caused resentment between the host and refugee populations, leading to violence on a number of occasions.

Towards an improved assistance model

There is a need for a new approach to refugee assistance in protracted situations – one that takes into account reduced vulnerability over time, actively promotes refugees’ ability

to support themselves economically rather than pushing them into dependence, and minimises tensions through better engagement of the host community. This would also make the return home swifter (by removing economic incentives to remain in the host country) and more durable (because refugees would retain their livelihood skills for use after return).

These are complex requirements, and there are serious obstacles involved. Under the current assistance model, refugees are theoretically insulated from the surrounding economy – their food is shipped in from outside the country, they are often not allowed to work outside the camp, and in any case they have few initial resources with which to participate in the wider regional economy. Increasing their participation in the regional economy could drive up prices as more consumers compete for local supplies of goods, and could put a strain on local natural resources. Another major obstacle, and one that is often a concern of host governments, is to avoid the creation of a permanent refugee settlement. If refugees develop businesses and support mechanisms within the local economy, there is a possibility that they will lose any interest in returning home, and will simply decide to settle permanently in the host country.

These are serious difficulties, but they can be dealt with. With regard to the permanence of a refugee settlement, these settlements are, in a protracted situation, semi-permanent already. The choice facing host governments is not, practically speaking, between a permanent or temporary settlement – rather, it is between a semi-permanent settlement that erodes the livelihood skills of its inhabitants, and one that does not. Nor does it necessarily follow that a refugee population that is deeply economically integrated with the host population will be slower to return because of these economic ties. While there is certainly truth in this, economic integration is unlikely to be a greater incentive to stay in the country of asylum than the provision of completely free food, health care, and education. Moreover, greater economic integration makes a cost-recovery approach more feasible, and this can be used to reduce the economic incentives for refugees to stay once the situation in their home country stabilises.

economic integration is unlikely to be a greater incentive to stay than the provision of completely free goods

The question of resource competition is more difficult. However, with proper engagement by humanitarian actors, the problem can be mitigated. The Foundation for International Dignity (FIND), a West African NGO, has conducted mediation workshops between refugees and host communities in camps in Sierra Leone. These workshops have resulted in agreements between refugees and

their host communities on resource-sharing issues such as the use of agricultural land. FIND's work demonstrates that, when actively addressed, these rivalries can be eased. Indeed, engaging the host community more extensively in producing goods for the refugees, while also supporting joint refugee-host community business enterprises, could provide tangible economic benefits to the host communities, creating new consumers for local goods, generating jobs, and spurring local economic activity.

Developing a new approach

The problems outlined here could largely be addressed by decreasing refugees' dependence on external assistance and better engaging the host community in assistance mechanisms. These actions would constitute an important move away from the traditional emergency response model towards a more appropriate protracted assistance model. Practical steps would include:

- *Increase attention to self-reliance*
Some agencies have been moving towards a greater focus on building refugees' economic self-sufficiency within camps. ARC's camp-based income generation activities for refugees across West Africa have proved very successful in developing refugees' business skills and enabling them to create small enterprises. When linked and coordinated with micro-finance activities in the country of origin, these activities create an incentive to return while improving the durability of the returns. A high percentage of the clients of ARC's micro-finance institution in Sierra Leone were formerly clients of ARC's camp-based income generation program in Guinea. ARC's gender-based violence programme also provided skills training to vulnerable refugee women in Guinea's camps. A post-repatriation follow-up survey, conducted by ARC in Sierra Leone, showed that more than 70% of the former GBV beneficiaries located by the surveyors were making use of their ARC-taught skills as their primary source of income.
- *Increase efforts to advocate with the government and host populations with regard to economic opportunities for refugees*
Humanitarian actors should greatly increase efforts to persuade governments and host populations to allow refugees fuller access to economic opportunities in the country of asylum. Farmland could be designated for refugee use, and refugees should be permitted to work and take jobs on the same terms as the local population (this has been tried with some success in Zambia).
- *Decrease assistance levels as the population stabilises, and build cost-recovery into remaining assistance activities*
As refugee vulnerability decreases, and in conjunction with activities that promote refugee self-sufficiency, NGOs' assistance levels should be decreased and linked to cost-share elements. To the extent that livelihood skills can be preserved by enabling refugees to operate within a more realistic economic context, humanitarian actors should strive to create such a

context. For example, health care providers in the camps could charge token fees for certain health care services; necessary caveats could be built in to ensure that refugees who remain extremely vulnerable would be exempt. This would be appropriate in a context like Guinea, where the surrounding host population pays fees for health services, and the refugees will have to pay such fees upon their return home. Token payments would reduce the economic disincentives to repatriation, and would also help to reduce fraud.

- *Balance levels of assistance for refugees and for the host population*

The traditional approach to refugee assistance pays lip service to the inclusion of the host community in assistance endeavours, but in Guinea and many other contexts, this is not a major consideration for humanitarian actors. A far better alternative would be to balance the levels of services available to both populations, while engaging the host population in the provision of services to the refugees. This would decrease tensions between the two groups, while creating a concrete incentive for the host population to be more welcoming to the refugees. One form that this could take would be the provision of health services through existing local health structures. Assistance could be structured to increase local capacity to handle the additional caseload, in conjunction with programmes to enhance the quality of services. This would provide tangible benefits to the host community, ensure a comparable level of services for refugees and the host population, and avoid the need to construct a costly and unsustainable parallel health system for the refugees.

These recommendations do not constitute an exhaustive list; however, they do indicate a better direction for refugee assistance in situations of protracted displacement. It is time to develop a transitional model for post-emergency refugee assistance – one that focuses on promoting refugees' self-reliance, and which does not create economic dependency. Humanitarian organisations can best assist refugees in situations of protracted displacement by enabling them to meet their own needs, rather than by seeking to meet those needs on their behalf.

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Dependency and humanitarian relief: a critical analysis

Paul Harvey and Jeremy Lind

HPG Report 19, July 2005

In many emergency contexts, aid agencies hesitate to provide food and other aid for extended periods because of fears that this may create 'dependency'. Concerns around dependency are about more than semantics: they can influence decisions about levels of assistance, and affect the type of assistance people receive, where and when.

This HPG research project explores the meaning, function and reality of dependency in humanitarian relief. It finds that people depend less on relief than is often assumed. There is little evidence that relief undermines initiative, or that it is delivered reliably or transparently enough for people to depend on it. The focus should not be on avoiding dependency, but on providing sufficiently reliable and transparent assistance so that those who most need it understand what they are entitled to, and can rely on it as part of their own efforts to survive and recover from crisis.

Copies of the Report, together with an associated HPG Research Briefing and background papers, can be downloaded from the HPG website at <http://www.odi.org.uk/hpg/Dependency.html>.

The Tsunami Evaluation Coalition: a new humanitarian initiative

Rachel Houghton, TEC Deputy Coordinator/Researcher

Sector-wide learning and accountability are goals that we all share. Over the past ten years there have been joint evaluation activities, starting with the multi-donor evaluation of the Rwanda genocide in 1994. Such attempts have been few, however, in part because the amount of coordination and work they require can be daunting.

The Tsunami Evaluation Coalition (TEC) is a new type of joint sector-wide learning and accountability mechanism, developed in connection with the Indian Ocean tsunami disaster. Constituted in February 2005, it represents a broad coalition of UN agencies, donors, NGOs and the Red Cross/Red Crescent Movement. Its purpose is two-fold:

1. To promote a sector-wide approach to evaluations of the tsunami response in order to optimise sector-wide learning.
2. To develop procedures for a future evaluation coordination mechanism that could facilitate such an approach.

The TEC is guided by a Core Management Group (CMG), and is hosted by the ALNAP Secretariat.¹ Participating agencies agree to work within an approach that encourages the sharing of information, lesson-learning, accountability and mutual support and transparency.

Agency-specific evaluations

Agencies involved in the TEC will continue to carry out planned real-time and 'traditional' evaluations, reviews and lessons-learned exercises. Participating agencies are encouraged, however, to undertake joint evaluations with other partners where feasible. Agencies not currently part of the TEC, and that have not yet planned an evaluation, are encouraged to consider the TEC as a substitute evaluation exercise/mechanism. Based on the outcome of the Synthesis Report (see below), as well as internal accountability needs, agencies can decide whether to launch a future evaluation. It is anticipated that the TEC will reduce the requirement for agency-specific evaluations for 2005.

TEC thematic joint evaluations

In addition to individual agency evaluations, a number of TEC members will work together to undertake five thematic joint evaluations. These will focus on more macro, policy-related aspects of the response, rather than operations *per se*. The focus of these studies is:

- coordination (including civil-military issues);
- needs assessment and targeting;
- impact on local and national capacities;
- linking relief, rehabilitation and development; and
- the international community's funding response, including an assessment of the role of the media.

An impact assessment study will also be developed as part of the TEC, and is expected to provide baseline data for the five joint studies.

¹ The CMG comprises representatives of the ALNAP Secretariat, OCHA, UNICEF, WHO, UNDP, IFRC, Danida, SDC, Sida, DMI and Groupe URD. ALNAP stands for the Active Learning Network for Accountability and Performance in humanitarian action (see www.alnap.org.uk).

These thematic evaluations will be 'partially joint', with joint work on some aspects and separate work on others by each of the evaluation teams. The TEC's Evaluation Advisor and Co-ordinator will provide methodological advice and guidance to these teams and seek to promote synergies and coordination between the studies where possible.

The role of the ALNAP Secretariat

The ALNAP Secretariat, on behalf of the TEC and under the guidance of the CMG, is providing the institutional platform for the TEC. The three-strong TEC Core Team coordinates the work of the Coalition, in particular the joint evaluations, as well as the development of a number of different 'outputs' or products. These are:

- the Synthesis Report;
- the Key Messages Report; and
- the Online Forum (www.alnap.org/tec), including the Evaluation Map.

The Synthesis Report is the most important output of the Coalition's work in 2005. It will focus on the emergency and initial recovery phase of the response. It will synthesise evaluation findings and learning included in individual agency evaluations and the thematic joint evaluations. Agencies must be part of the Coalition to have their study included in this report. Key messages emerging from the synthesis will be communicated by the first anniversary of the disaster (i.e. December 2005). The final synthesis will be published in February 2006.

The Online Forum (www.alnap.org/tec) hosts all the information relating to the work of the Coalition, including terms of reference for the thematic joint evaluations, resources for evaluators and minutes and other documents from all Coalition and Core Management Group meetings. The Forum also hosts an evaluation map of current and planned evaluation activity, with a form for agencies to fill in to tell us of the details of their evaluative work. The map is a compilation of all information received by the TEC Core Team about current and planned evaluative activity in tsunami-hit countries. It is intended for use by Coalition members to help them harmonise their work and avoid duplication of effort.

A unique new initiative

The creation of the TEC may well result in a new type of joint, sector-wide learning and accountability mechanism. In this regard the Coalition has built on lessons from a number of different joint evaluation exercises. Participating agencies are seeking to reduce the evaluative burden on the humanitarian sector by sharing ToRs and emerging lessons, as well as by working together on the five joint evaluations.

The collaborative approach of the TEC is in line with current trends towards more joint evaluation efforts. Moreover, working jointly increases the credibility of evaluations and offers the opportunity for evaluations to focus on macro and policy-related issues. Participating agencies believe that this increases the likelihood of evaluation findings being used to their full potential, and agencies involved in the TEC are committed to following up on the use of findings in this regard. In addition, the TEC will set an important institutional precedent for future collaboration.

Who counts? Financial reporting to beneficiaries: improving quality by improving participation

Alex Jacobs, Mango

Humanitarians are their own worst critics. Evaluations particularly show how much we struggle to achieve community participation. Our standards recognise its central importance. Our models recognise that, without it, emergency relief aid (as in Darfur) can be high-quality, but longer-term reconstruction or rehabilitation support (as after the Indian Ocean tsunami) is likely to be unsustainable, or irrelevant. But evidence shows that it is difficult to achieve in practice.

This situation is partly due to the humanitarian imperative: in the face of life-threatening need, some standards are likely to be jettisoned. But our funding and organisational arrangements make the problem worse. They focus attention on upwards accountability, and provide no hard incentives for downwards accountability. Given that field staff are normally overwhelmed with existing priorities, and given that participation is difficult, time-consuming and complicates field work, what can be done to create incentives for participation, and increase the impact of rehabilitation?

Downwards accountability and participation in theory

Red Cross Code Principle 7: ‘Ways shall be found to involve programme beneficiaries in the management of relief aid ... We will strive to achieve full community participation in our relief and rehabilitation programmes.’

Red Cross Code Principle 9: ‘We hold ourselves accountable to both those we seek to assist and those from whom we accept resources.’

Sphere Humanitarian Charter: ‘We acknowledge that our fundamental accountability must be to those we seek to assist.’

Sphere Common Standard 1: ‘Participation: The disaster-affected population actively participates in the assessment, design, implementation, monitoring and evaluation of the assistance programme.’

HAP International: ‘The mission of HAP International is to make humanitarian action accountable to its intended beneficiaries ... The members of HAP-I are committed to listening to the intended beneficiaries of humanitarian action so that the quality and effectiveness of their humanitarian work is improved.’

Good Humanitarian Donorship Principle 7: ‘Request implementing humanitarian organisations to ensure, to the greatest possible extent, adequate involvement of beneficiaries in the design, implementation, monitoring and evaluation of humanitarian response.’

This article describes one practical response: the Who Counts? Campaign (www.whocounts.org), launched by Mango in April 2005. Mango is a UK NGO that specialises in financial management capacity-building. The campaign encourages NGOs to provide financial reports to their beneficiaries. Evidence shows that this can substantially improve the quality of participation. Using this information, beneficiaries can see how funds are being used, which creates a positive pressure in favour of dialogue between beneficiaries and agency staff. It is a move in the right direction, which brings its own risks, rather than a complete solution to the issue of participation. It must also be sensitively adapted to different circumstances. But the principle is clear: information is power; informed beneficiaries are in a position to work with agency staff to make sure that funds are spent on their real priorities. The risk of fraud is reduced, as is the risk that funds are spent on inappropriate activities.

Reducing corruption and improving education

This case study is drawn from the development literature. It has direct relevance for humanitarian agencies’ longer-

Downwards accountability and participation in practice

The annual reviews produced by ALNAP (the Active Learning Network for Accountability and Performance in Humanitarian Action) synthesise the findings of approximately 50 independent evaluation reports from humanitarian agencies every year. The conclusions of the 2002 and 2003 reviews include:

‘Individual NGO and other evaluations conclude that interventions were generally successful in meeting short-term objectives.’

‘In terms of consultation with and participation of primary stakeholders, this year’s reports echo the disturbing story of the past two years: the limited ability of agencies to promote participation beyond implementation activities.’

‘there is a dearth of good practice in involving the affected population in the delivery of humanitarian aid’.

‘reports are littered with images of hospitals built but partly used; food-for-work schemes providing little lasting benefit; and hand pumps unused for lack of spare parts and maintenance’.

‘there is overwhelming evidence from a large number of evaluations that agency policy and practice is out of keeping with local culture’.

Sources: ALNAP, *Annual Review 2003* (reviewing humanitarian action in 2002) and *Annual Review of Humanitarian Action in 2003*, both available at www.alnap.org.

term rehabilitation work (such as that financed by the unprecedented funds available after the tsunami).

In 1995, a survey showed that the average primary school in Uganda received only 24% of certain funds it was entitled to from the central government. The rest appeared to leak away through local corruption. The government responded by launching a newspaper campaign to explain how school funding was calculated, and publishing information about financial transfers. This provided schools and parents with information they could use to monitor local officials' work.

information is power; informed beneficiaries are in a position to work with agency staff to make sure that funds are spent on their real priorities

A repeat survey showed that, subsequently, the average primary school received 82% of its entitlement: an extraordinary improvement, with substantial implications for the quality of education. An additional study showed that the percentage of money a school received was related to how close the school was to the nearest newspaper outlet, providing evidence of a direct link between the press campaign and improvements in funding. In this case, financial transparency drove major improvements in service provision.

Putting downwards accountability first

Outside its offices in the Western Region of Kenya, ActionAid Kenya has put up public information boards that display budgets, the funds available for each area and a monthly update of expenditure. The simple white-boards are mounted on a frame, and covered by a small roof.

ActionAid Kenya has experimented with a range of ways of providing financial information to partner organisations and beneficiaries. Staff commented that, as a result, 'local people were able to ask why certain decisions were reached, and to express their frustration when expenditure did not address their priority needs'. As part of its response to the Gujarat earthquake in 2001, ActionAid India published financial statements of its activities in Gujarati newspapers.

The evaluations by the UK's Disasters Emergency Committee (DEC) of Gujarat 2001 and Southern Africa 2003 found that ActionAid was the only DEC agency that provided financial reports to beneficiaries during these responses. This is a direct result of its revolutionary Accountability Learning and Planning System (ALPS), an attempt to redesign the basic organisational architecture of a major NGO, moving away from a hierarchical and project-based structure, and put downwards accountability at the heart of their systems.

Reporting to beneficiaries in practice

The Who Counts? Campaign provides initial guidance on how to provide financial reports to beneficiaries in practice. Like all financial reports, they have to present information that is useful to their readers, in a way that is easy to understand. For instance, public whiteboards or photocopied summaries at health centres, community meetings or local offices can do the trick. Reports should be presented in local language and local currency, and contain no more than 15 lines of information. Simple graphical presentation can be particularly powerful. Reports should be presented regularly, every month. This is crucial for on-going monitoring, and to encourage feedback on current activities so that they can be adapted in the light of experience.

It is not always easy to decide what information to include in reports. It is often most useful to compare expenditure against the budget. But salary information is always sensitive, and transport costs can be higher than the value of relief goods being distributed. There is no right answer to the amount of information to publish. But some is generally better than none. Cultural norms and social pressures will influence what information is appropriate. But, as funds are given by donors for beneficiaries rather than agencies, beneficiaries have as much right as anyone to question how funds are used.

beneficiaries have as much right as anyone to question how funds are used

Financial reporting to beneficiaries also provides a much-needed opportunity to involve finance staff in programme activities, and strengthen the links between finance and programme staff. This can reduce tension between team members, and be motivating for finance staff, contributing to a shared sense of purpose and the smooth running of teams operating under pressure.

Risks and a note of caution

There are risks associated with financial transparency. In conflict situations, it can make beneficiaries and agencies more of a target. It can create tension between team members, between agencies, government, and other interest groups – and among all of these stakeholders and beneficiaries. It may be manipulated for political gain. These risks are likely to be particularly acute during a first-phase emergency response.

This initiative is not a panacea: it aims to set out a general principle, which can help to encourage more good practice. It will always need to be sensitively adapted to local circumstances. But these risks must be balanced against the risks of continuing as we are: building more unused hospitals, installing more water pumps to rust away, wasting more funds, and leaving more long-term needs unmet.

A personal challenge

If this argument makes sense to you, then why not start pushing to provide financial reports to beneficiaries yourself? Just as much good practice is achieved through the decisions of individuals as through organisational commitments. If you are personally committed to improving the quality of work in the sector and recognise the arguments outlined above, then why not discuss this idea with your colleagues, and start considering how much information you could publish to beneficiaries straight away?

Alternatively, as funds are given on behalf of beneficiaries, it is always reasonable to ask why your agency or programme should *not* make this information available.

Conclusion

Financial reporting to beneficiaries can encourage a

step-change in the quality of participation. Once beneficiaries understand an agency's financial position, they are empowered to ask more about what is being done on their behalf, and to push agency staff to recognise their real needs. This should be welcome – if demanding – pressure. It can transform the relationship between beneficiary and agency. It is widely recognised that participation is necessary for high-quality rehabilitation work. But it also makes life complicated for field staff. By making financial information freely available, we can create real pressure for good practice – and that must be good for all stakeholders: beneficiaries, donors and agencies alike.

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Interpreting and using mortality data in humanitarian emergencies: a primer

Francesco Checchi and Les Roberts

Network Paper 52, September 2005

Suffering is everywhere, but some populations experience extraordinary crises due to natural disasters, war, political repression, displacement, hunger and epidemics. The common denominator of these public health emergencies is the spiritual and physical harm they inflict on individual human beings. The former is difficult to detect and quantify. As for the latter, in humanitarian emergencies its most extreme form – death – takes on rudimentary mathematical connotations as an increase in mortality from levels considered 'normal' in non-crisis times. Information on mortality offers an immediately comprehensible, overarching view of the physical experience of affected populations over a given time interval. It is to a population in distress what vital signs are to a patient.

This paper argues that properly collected, properly interpreted and properly used mortality data have much to contribute to the appropriateness and effectiveness of humanitarian action in emergencies, and to advocacy on behalf of populations in crises. Written from the standpoint of the end-user of mortality data, it presents key indicators used to express these data, different options for how to measure mortality rates, and suggestions for how to assess, interpret and use mortality reports. It also includes a discussion on the politics of mortality figures. The paper aims to enable readers to critically interpret mortality studies, and to understand how these are used (or misused) to formulate policy. The intended audience is therefore all humanitarian actors, policy-makers, the media and members of affected communities, regardless of their technical background.

Copies of this Network Paper available on the HPN website at <http://www.odihpn.org/documents/networkpaper052.pdf>.

Humanitarian issues in Niger

Paul Harvey, HPG

Newspapers and television have given extensive coverage to the humanitarian crisis in Niger. Many commentators have legitimately asked how, in a year when attention was meant to be focused on Africa, and only a few weeks after the G8 summit, we have managed to let such a crisis develop in a peaceful and democratic country. The answer from most humanitarian actors thus far has been that warnings about the potential crisis were given, but donor governments were too slow to respond, particularly to UN appeals.

A recent Humanitarian Policy Group Briefing Note entitled *Humanitarian Issues in Niger* argues that it is important to examine the failings of international engagement with Niger in a broader sense. Whilst there were clear warnings throughout 2004 and into 2005 about the potential for crisis, there are serious questions over the strategies proposed to deal with the crisis. Until very recently, the Niger government and UN agencies avoided free food distributions. The focus was on subsidised cereal sales, cereal banks, food and cash for work, subsidised fodder provision and preventative veterinary care. In part, the reluctance to accept a need for free food seems to have stemmed from concerns that it would disrupt markets, create dependency and undermine development efforts. As the recent HPG report *Dependency and Humanitarian Relief: A Critical Analysis* argues, fears about dependency should not be a justification for not providing relief. The doubling of food prices and the collapse in terms of trade for livestock should have triggered a much earlier relief response. There are also serious questions about the wisdom of a strategy that relied so heavily on subsidised cereal sales, when the amounts distributed were insufficient and prices kept on rising.

There is a clear divergence of views among international actors on the magnitude and intensity of the crisis. Some NGO appeals talk of millions facing imminent starvation. Other actors point to localised pockets of acute food insecurity, and are adamant that this does not constitute a famine. There seems to be a difference of view as to whether current levels of malnutrition and food insecurity are exceptional, or whether they constitute a relatively normal occurrence during the hungry season in this desperately poor country. But the fact that the present situation may be largely a consequence of chronic poverty can be no



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*Tilling fields near Magariya Koshimawai,
southern Niger, July 2005*

excuse for failing to respond to crisis levels of hunger and suffering.

As well as inappropriate or inadequate strategies for response, there also seems to have been a lack of capacity on the part of humanitarian actors. Relatively few aid agencies were present in Niger, and humanitarian capacity at a global level was over-stretched, with ongoing responses in Darfur and to the Indian Ocean tsunami. This seems to have been as much a question of lack of human resources as lack of funding.

Over the past year, there has been much discussion of the need to reform the humanitarian system. Niger shows just how far that system is from providing a timely, effective and proportionate response. The crisis is being cited as an example of why new mechanisms are needed to improve performance, such as an expanded emergency reserve fund. But the failure to respond more effectively to the Niger crisis has as much to do with a failure of analysis and a lack of implementing capacity as it does with available funds.

By early August 2005, a significant humanitarian response to the Niger crisis was getting under way. What matters most immediately is that emergency assistance in Niger and elsewhere in the region reaches those that desperately need it. But it is important that lessons are learnt from the failure to respond earlier. Merely blaming donors is not good enough. All the actors involved – including the Niger government – need to take a critical look at their own responsibilities. There is a need to examine the quality, credibility and effectiveness of early-warning and assessment analysis, and the appropriateness of the actual responses. Humanitarian actors need to examine their own capacity to respond to crises at a global level, and development actors in Niger need to look at their preparedness and willingness to recognise and respond to crisis levels of suffering, regardless of whether these are chronic or acute. Given these uncertainties about information and capacity, it is also vital that the scale and extent of food insecurity and possible crises in Mali and Mauritania continue to be closely monitored.

The HPG Briefing Note *Humanitarian Issues in Niger* is available on the HPG website at <http://www.odi.org.uk/hpg/papers/HPGBriefingNote4.pdf>. HPG Report 19, *Dependency and Humanitarian Relief: A Critical Analysis*, can be found at <http://www.odi.org.uk/hpg/papers/hpgreport19.pdf>.

Disaster risk reduction: mitigation and preparedness in aid programming

John Twigg

Good Practice Review 9, March 2004

Natural disasters – disasters resulting from natural hazards such as cyclones, droughts, floods, earthquakes, landslides and volcanic eruptions – are widespread and numerous in developing and middle-income countries. They can cause great loss of life and immense damage to communities, infrastructure and national economies. Ethical, humanitarian considerations oblige us to act to protect human life and prevent suffering. Many researchers and aid institutions have identified natural disasters as a major threat to sustainable development.

This Good Practice Review aims to help project planners and managers to:

- appreciate the significance of hazards (primarily natural hazards) and the risks associated with them;
- appreciate the need for risk management in project planning and implementation, and the value of such efforts;
- recognise the main issues that must be understood and addressed when carrying out risk reduction or disaster mitigation and preparedness initiatives; and
- understand – at least in broad terms – how to address these issues in practice, throughout the project cycle.

It is easy to be intimidated by the scale and extent of the problem, and the variety of counter-risk approaches that can be taken. But lasting protection against disasters will not be reached overnight. It is a long-term goal to be attained through a continuous process of improvement. Community resilience to hazards can be built up incrementally over time, as long as the basic approach is sound.

This Review is above all a practical document. However, it is not a manual. Its emphasis is on the process of planning and implementing risk reduction initiatives. It focuses on key issues and decision points and how to address them. Readers are referred to more detailed technical manuals and studies where appropriate. It has been difficult to present a balanced coverage of such a broad and diverse subject, and there are inevitable gaps. Nevertheless, the book is evidence-based. The descriptions and discussions are supported by case studies, which aim to give a sense of the range and diversity of practical approaches that can be used.

For a copy of this Good Practice Review, contact a.prescott@odi.org.uk. The review is available for download at the HPN website: www.odihpn.org/publistgpr9.asp.

Humanitarian Practice Network

The **Humanitarian Practice Network (HPN)** is an independent forum where field workers, managers and policymakers in the humanitarian sector share information, analysis and experience.

HPN's aim is to improve the performance of humanitarian action by contributing to individual and institutional learning.

HPN's activities include:

- A series of specialist publications: *Humanitarian Exchange* magazine, Network Papers and Good Practice Reviews.
- A resource website at www.odihpn.org.
- Occasional seminars and workshops bringing together practitioners, policymakers and analysts.

HPN's members and audience comprise individuals and organisations engaged in humanitarian action. They are in 80 countries worldwide, working in northern and southern NGOs, the UN and other multilateral agencies, governments and donors, academic institutions and consultancies. HPN's publications are written by a similarly wide range of contributors.

HPN's institutional location is the Humanitarian Policy Group (HPG) at the Overseas Development Institute (ODI), an independent think tank on humanitarian and development policy. HPN's publications are researched and written by a wide range of individuals and organisations, and are published by HPN in order to encourage and facilitate knowledge-sharing within the sector. *The views and opinions expressed in HPN's publications do not necessarily state or reflect those of the Humanitarian Policy Group or the Overseas Development Institute.*

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