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Changes to malaria national treatment policy in Africa

Health reporter, 12 June 2009

Feature: Changes to malaria national treatment policy in Africa

Recommended readings:

- Operational accuracy and comparative persistent antigenicity of HRP2 rapid diagnostic tests for plasmodium falciparum malaria in a hyperendemic region of Uganda
- Malaria misdiagnosis in Uganda – implications for policy change
- Malaria case-management under artemether-lumefantrine treatment policy in Uganda
- Working without a blindfold: the critical role of diagnostics in malaria control
- Influence of rapid malaria diagnostic tests on treatment and health outcome in fever patients, Zanzibar - a crossover validation study

Latest additions:

- The impact of conflict on women's education, employment and health care
- Searching for patients: Norwegian testing of pharmaceuticals and treatment methods in developing countries
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Announcements

Feature: Changes to malaria national treatment policy in Africa

While new developments in the treatment and diagnosis of malaria are greatly aiding the malaria response, it is nonetheless important to ensure that quality of care is maintained to a high standard.

Since the development of significant resistance to the previously used antimalarial drugs,

most endemic countries have by now changed their national treatment policy to artemisinin-based combination therapy (ACT). While ACTs are very effective in curing malaria, they are substantially more expensive than the old drugs. In order to ensure a high standard of adaptation to the new drug policy, a comprehensive programme including development of new guidelines, sensitisation and re-training of health staff, sensitisation of the public, revision of drug supply management and strong support and supervision across health facilities is required. If this is not taken seriously from the start, there is a high likelihood of confusion and poor standard of prescribing becoming widespread.

It is very important to avoid over-use of ACTs, partly to keep costs down but also to minimise the risk of developing resistance to the drugs. To ensure that only true cases of malaria receive ACT drugs, there is a need for accurate diagnosis of malaria at all levels of health care delivery. Historically it was acceptable to assume all cases of fever were malaria and treat accordingly, as the drugs were extremely cheap and also safe to use. However, this resulted in massive over-treatment for malaria; in some cases up to 90 percent of presumptively treated cases did not have malaria when further investigated.

While high quality microscopy remains the method of choice for diagnosing malaria wherever possible, the recent advent of rapid diagnostic tests (RDTs) has greatly increased the capacity to accurately diagnose malaria at all levels of the health service, as well as in the community. RDTs can be performed with very little training, can be done anywhere and their level of accuracy is as high, if not higher, than routine malaria microscopy. It is important however, that a country makes an informed choice to select the type of RDT most suitable to their own context, as there are many different RDTs available. As RDTs become more widely used to diagnose malaria, it is hoped that misdiagnosis will decrease and fewer people will rely on their local shops to informally diagnose and supply them with possibly ineffective drugs.

Many thanks to Lara Brehmer, from the COMDIS Research Programme Consortium, UK, for writing the content for this Health Reporter.

More information:

- COMDIS
www.leeds.ac.uk/nuffield/research/COMDIS.htm
- Malaria Consortium
www.malariaconsortium.org/
- Malaria Journal
www.malariajournal.com/
- The Roll Back Malaria Partnership
www.rbm.who.int/
- Malaria Foundation International
www.malaria.org/
- tropIKA.net
www.tropika.net/

- African Malaria Network Trust (AMANET)
www.amanet-trust.org/
 - The Horn of Africa Network for Monitoring Antimalarial Treatment
www.hanmat.org/
 - Malaria, Eldis Health Resource Guide
www.eldis.org/go/topics/resource-guides/health/malaria
 - Diagnosis of malaria in resource-poor settings, Eldis Health Reporter, January 2007
www.eldis.org/go/topics/resource-guides/health/health-reporter/january-2007
 - Hitting malaria where it hurts: household and community responses in Africa, id21 health insights #9, August 2006
www.id21.org/insights/insights-h09/index.html
-

Recommended readings

1. Operational accuracy and comparative persistent antigenicity of HRP2 rapid diagnostic tests for plasmodium falciparum malaria in a hyperendemic region of Uganda

Authors: D. J. Kyabayinze; J. K. Tibenderana; G. W. Wong
Publisher: Malaria Journal, BioMed Central, 2008

The management of malaria largely depends on the accuracy and timeliness of diagnosis. The authors recognise that microscopy is seen as the ‘gold standard’ in the diagnosis and treatment of malaria. However, they argue that this method is not without its challenges, including the availability of functioning microscopes and the need for training professionals to operate this equipment and interpret the results.

The authors advocate for the use of the immuno chromatographic test (ICT) but they recognise that further studies need to be conducted on the accuracy of this and other rapid diagnostic tests. They examined the accuracy of ICT in the diagnosis of 357 patients in Uganda, who presented with fever and other symptoms associated with malaria. These results were compared with microscopy to assess the accuracy and effectiveness of this form of test.

It was found that the ICT is an effective form of diagnosis that can be easily utilised in a variety of settings. And while the authors of this paper support the use of rapid diagnostic tests when compared to microscopy; they note that the accuracy of all types of these tests have not been fully scrutinised and further investigation is required.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43707&type=Document

2. Malaria misdiagnosis in Uganda – implications for policy change

Authors: J. Nankabirwa; D. Zurovac; J. N. Njogu
Publisher: Malaria Journal, BioMed Central, 2009

This article examines the effectiveness of the current methods for the diagnosis of malaria in Uganda. Diagnosis has mainly been through presumptive management – that is diagnosis on the basis of episodes of fever. However, the authors of this paper argue that while these recommendations are valid, this form of diagnosis has significantly contributed to the over-diagnosis of malaria in all age groups in mid to high transmission areas. While the diagnosis in children under the age of five years old using this method has led to under-diagnosis.

The study investigators conducted interviews with patients at 188 facilities and took laboratory samples in order to assess the accuracy of the existing diagnosis. It was found that the overall prevalence of malaria was around 24.2 percent, with a rate of 13.9 percent in adults and 50.5 percent for children under the age of five years old. Furthermore, the use of microscopy was lower than expected in facilities where this diagnostic method was available. In terms of treatment for malaria, 96.2 percent of patients with a positive diagnosis received treatment as well as 47.6 percent of patients with a negative result.

In order to address issues pertaining to the misdiagnosis of malaria, the current reliance on the existence of fever should be re-examined. The study authors therefore argue for changes in existing public health policy to include the use of laboratory methods such as microscopy and the introduction of malaria rapid diagnostic tests in order to reduce the incidence of malaria misdiagnosis in Uganda.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43709&type=Document

3. Malaria case-management under artemether-lumefantrine treatment policy in Uganda

Authors: D. Zurovac; J. K. Tibenderana; J. Nankabirwa
Publisher: Malaria Journal, BioMed Central, 2008

This article published in the Malaria Journal explores the use of medications for the treatment of malaria in Uganda. Malaria is an infectious disease that is prevalent in tropical countries. The disease has significantly impacted on the morbidity and mortality of a number of countries in the African region.

African public health policy promotes the use of medications known as artemisinin-based combination therapy (ACT); specifically artemether-lumefantrine (AL) for the treatment of malaria. In cases where AL is not available other combinations of ACT can be utilised as an alternative. This policy was adopted by at least 21 countries in Africa due to the ineffectiveness and resistance caused by other forms of treatment.

The authors conducted a cross-sectional survey that evaluated 1,763 outpatient

consultations involving 232 health workers at 195 health facilities across Uganda. The objective of the study is to assess the quality of AL case management.

The authors found that of the 1,200 patients found to need treatment with AL, 60 percent were prescribed with this drug based on the current treatment policies. The study also highlighted that 95 percent of the patients treated with AL were prescribed the correct dosage. It was also found that health care workers performed three of out the seven tasks related to the dispensing of AL medications with more than 50 percent of those included in the study.

While this study addresses the practices surrounding the utilisation of AL, the authors note that further investigation is required about the quality of care provided. Previous work addressing the AL case management practices were limited and undertaken in some instances as much as one year after the implementation of AL policies.

The study found that while AL treatment is used in accordance with the shift from other forms of therapy, further attention should be paid to the practices aimed at improving the quality of care associated with this form of treatment.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43705&type=Document

4. Working without a blindfold: the critical role of diagnostics in malaria control

Authors: M. D. Perkins; D. R. Bell

Publisher: Malaria Journal, BioMed Central, 2008

Increases in the cases of malaria continue to pose a challenge for public health specialists. Despite advances in laboratory methods, pharmaceutical interventions and preventative measures, combating the increases in the cases of malaria still largely depends on the diagnosis and management of the disease.

This paper highlights how efforts to control malaria are influenced by the use of inappropriate methods for the diagnosis and treatment of malaria. The authors argue that while there have been changes in the management of malaria, these gains will be lost if suitable diagnostic methods are not utilised.

Traditionally, malaria was diagnosed through presumptive methods - that is the presence of a fever. While the authors recognise that this has resulted in positive health outcomes for some, the absence of laboratory methods for the diagnosis of malaria has resulted in the over-diagnosis of the disease. Furthermore, improper diagnosis of malaria can result in: wasted resources due to the prescription of anti-malarial drugs for patients who do not need them, drug resistance due to the improper use of the medications, and changes in public opinion about the disease and persons who are found to be positive.

The authors present the case for the use of rapid diagnostic tests in places where

microscopy is unavailable as they recognise that the latter form of diagnosis is not only costly but difficult to utilise in remote settings. They also discuss methods to ensure the quality of the various diagnostic methods. The paper concludes by reiterating the need to utilise laboratory based methods of diagnosis rather than reliance on syndromic management, namely classifying all 'malaria-like' fevers as malaria, due to the increased likelihood for mis-diagnosis.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43708&type=Document

5. Influence of rapid malaria diagnostic tests on treatment and health outcome in fever patients, Zanzibar - a crossover validation study

Authors: M. I. Msellem; A. Martensson; G. Rotlant
Publisher: Public Library of Science Medicine, 2009

Malaria continues to impact significantly on the lives of persons from regions where the disease is present. While major gains have been made in the development of anti-malarial medications for the treatment of malaria, the focus continues to be on methods for the accurate diagnosis and management of the condition.

The use of laboratory based tests have been well cited in the scientific literature. The authors of this paper reinforce the existing arguments by conducting a cross over clinical trial with 1,887 patients in Zanzibar; Republic of Tanzania. This paper presents scientific evidence in support of the need for diagnostic tests. The study investigators contend that tests eliminate misdiagnosis and the subsequent treatment of persons for an illness that they do not have. They also add that the failure to correctly diagnose clients has contributed to another dimension in the fight against malaria – resistance to the available treatment.

Furthermore, data is provided to highlight the need for laboratory tests to assist with the diagnosis of persons rather than on the basis of clinical observations. However, the central point of this discussion is for the use of scientific methods in order to reduce the problem of the overuse of artemisinin combination therapy (ACT) and the resulting drug resistance. The paper also addresses issues associated with the use and accuracy of the rapid diagnostic test.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43706&type=Document

Latest additions from the Health resource guide

1. The impact of conflict on women's education, employment and health care

Authors: A. McDevitt

Publisher: Governance and Social Development Resource Centre, 2009

Conflict restricts women's freedom of movement. The subsequent impact on education, employment and health care is hard, therefore, to dispute but are these effects universal? This brief focuses on the Middle East, Latin America, and central and east Asia. The paper states that the extent to which conflict restricts women's freedom of movement depends on a number of factors including the stage of conflict, whether the women are displaced, whether they are directly or indirectly affected by the conflict, and the cultural norms of the conflict-affected area. Forced displacement, for example, may in some cases lead to greater mobility, where women assume additional responsibilities such as taking on the role of primary breadwinner.

Nevertheless, the author continues, it is generally accepted that the fear of violence more often than not restricts women's freedom of movement. In times of political, economic and social uncertainty, there is a strong tendency to revert to traditional values which appear to offer protection for women and girls but which restrict their mobility.

Some of the negative impacts of conflict on women's health and education include:

- access to reproductive health care facilities is often lacking the needs of men and combatants may be given precedence over
- the needs of women and non-combatants
- women's access to health care may be constrained by household and domestic tasks or cultural norms
- when schools are destroyed, and children have to travel long distances, girls are more likely to stay at home
- in emergencies, there are usually far fewer women who are able to volunteer as teachers, and girls are disproportionately affected when schools are dominated by men
- teenage pregnancy rates are often very high in refugee camps, and girls with their own babies may not be able to attend school
- girls who are disabled, disfigured or severely mentally affected by the crisis are likely to be kept at home.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43593&type=Document

2. Searching for patients: Norwegian testing of pharmaceuticals and treatment methods in developing countries

Authors: E. Hagen

Publisher: NorWatch, 2009

In Norway there have been two Norwegian companies that have tested their products in

developing countries. A-Viral tested AIDS medications in 300 HIV/AIDS-positive persons in Uganda in 1997-1998 and in 13 such persons in the Philippines in 2000-2002. The company NorChip tested equipment for diagnosing cervical cancer in 340-350 women in civil-wardevastated Congo in 2003. This report presents the patients' stories, and examines the ethics of the companies' practices.

The final chapter is an interview with Sonia Shah, the Canadian author of the book *The Body Hunters*, about how she thinks the dilemmas of trials should be solved.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43493&type=Document

3. AID All in Diary: a practical tool for field based humanitarian workers

Authors: L. Richardson; G. Price

Publisher: AID All in Diary - a practical tool for field based humanitarian workers, 2009

The immediate pressures of working in a disasters environment mean that humanitarian workers can struggle to access the most relevant information needed for the situation in which they are working. The AID All In Diary is designed for use in disaster situations and is specifically aimed at field based humanitarian workers in international and local NGOs. It aims to improve the quality and appropriateness of relief work and offers a comprehensive single source of the most up-to-date humanitarian information and resources.

The handbook covers key areas of humanitarian and emergency assistance work such as:

- humanitarian principles including humanitarian law, codes of conduct and good practice, accountability, the UN role in humanitarian action and protecting those at risk
- disaster preparedness including disaster management and disaster preparedness planning, linking relief, rehabilitation and development, the Cluster Approach
- disaster response including dealing with refugees and IDPs, how to target aid, managing security and organising logistics
- minimum standards in water and sanitation; promotion of hygiene, food security, nutrition and food aid; shelter, settlement and non-food items; health services
- aspects of rehabilitation such as planning settlements, supporting livelihoods, provision of psychosocial support
- the immediate and wider environment, using mapping and GIS, taking climate change into account
- managing projects including undertaking assessments, raising funds, monitoring and evaluation, managing finance and writing reports
- working with communities including working in different cultures, participatory approaches and developing partnerships, working with children and taking gender into account, addressing HIV and AIDS
- effective meetings and multi-language meetings, using multi-media resources,

- facilitating and running workshops
- managing people including recruiting and managing staff, handovers, personal security, health and managing stress, learning and professional development

The handbook is regularly updated and is also available in Tamil and Sinhala. Each information sheet can also be downloaded as individual PDFs from www.allindiary.org. All in Diary also aims to produce paper versions in-country, in response to rapid-onset emergencies.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43456&type=Document

4. HIV in Pakistan: preventing a future epidemic in most-at-risk groups

Authors: Programme for Research and Capacity Building in Sexual and Reproductive Health and HIV in Developing Countries

Publisher: London School of Hygiene and Tropical Medicine, 2009

Very low levels of HIV and AIDS awareness and condom use, together with high-risk sexual behaviours in vulnerable groups such as injecting drug-users and sex workers, make Pakistan a potentially high-risk country for HIV spread. Current HIV prevalence is generally low but STI levels are high in some at-risk groups. This research briefing, from the Programme for Research & Capacity Building in Sexual and Reproductive Health & HIV in Developing Countries, outlines the findings of a study to investigate the extent of sexually transmitted infections and HIV epidemics among populations at risk through selling sex or through injecting drugs. The study also looks at associated behaviours including risk taking and protection from risk in these groups. The document shows how violence, abuse and discrimination are commonly experienced by sex workers and injecting drug users, and can increase the likelihood of infection. A future HIV epidemic is likely to be concentrated in those with highest levels of STIs and the highest levels of abuse – transgender sex workers.

Five key interventions are recommended to stem the transmission of HIV/STIs in Pakistan. These include needle and syringe exchange programmes for injecting drug users and sexual and reproductive health care for female sex workers. The authors argue that interventions targeted at transgender sex workers will have little support among society, and it will be difficult for the government and public sector to implement, but they could be implemented successfully by NGOs, with donor funding and support. For interventions to be successful and sustainable, the underlying vulnerabilities and environment faced by all of the most-at-risk groups must be addressed. Interventions must recognise, protect and promote the human rights of all individuals.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43394&type=Document

5. Women, HIV and human rights: the crisis of criminalization

Authors: A. Welbourn; The Salamander Trust

Publisher: All Party Parliamentary Group on AIDS, UK, 2009

This document outlines a presentation given by the Salamander Trust at a meeting on women and AIDS at the House of Commons in Westminster. The presenter details how, because of global attitudes, women with HIV/AIDS have seen their reproductive health rights and rights to liberty systematically and institutionally eroded. The document shows how some countries are now sterilising young positive women, coercing them to sign consent forms when in labour, so that after delivery when they go for contraception, they learn that this is no longer needed. The author argues that it is possible government doctors should face criminal charges. The presentation contains a list of facts and figures and examines what the UN and other organisations have been doing to safe guard HIV positive women.

The UN agencies have promoted global guidance, and campaigns such as 'Know your epidemic' and 'Save the Unborn Child' to promote an 'AIDS-free generation'. The document argues that these guidelines were supposed to promote voluntary and confidential testing of pregnant women, with pre- and post-test counselling. But they have resulted in compulsory mass testing of pregnant women – and unless tested, many women are refused access to further ante-natal services. For those who test positive, this becomes public knowledge. The author outlines how as states were becoming increasingly desperate to curb the spread of HIV, a US backed initiative launched the Model AIDS Law in West Africa. Thus, in Sierra Leone now, for example, if a woman transmits HIV to her child, she can be fined or jailed up to 7 years or both. The author warns how the spread of criminalisation legislation means that many years of careful, committed and compassionate HIV prevention work in many countries are being blown apart overnight by people's fears that testing positive will mean that they could then be branded as disease vectors and as criminals. The presentation ends with some areas where positive action is taking place but highlights the importance of keeping up the pressure to roll out universal sex and relationships education, for young people especially, in order to support them to stay HIV negative.

Available online at: www.eldis.org/go/topics/resource-guides/health&id=43376&type=Document

Announcements

1. Meeting: Health and Governance in Fragile States

Dates: 18 June 2009, 5.00-6.30pm

Location: Upper Meeting Room, International Development Centre, 36 Gordon Square, London, UK

This event being held at the London International Development Centre, will launch two

key outputs:

- the Eldis Health and Fragile States online dossier
- the Health & Fragile States Network's Good Practice Report on Health Service Delivery in Fragile States.

Speakers

Egbert Sondorp, London School of Hygiene and Tropical Medicine (LSHTM)

Jonathan Goodhand, School of Oriental and African Studies (SOAS)

Natasha Mesko, Politics and State Team, UK Department for International Development (DFID)

RSVP: To reserve a seat please contact Guy Collender, Communications Officer, LIDC, guy.collender@lidl.bloomsbury.ac.uk, 020 7958 8260

More details available online at: www.eldis.org/go/topics/resource-guides/health/health-events-and-announcements&id=43477&type=Item

2. Training: Developing health course

Dates: 28 June - 10 July 2009

Location: Oak Hill College, Chase Side, Southgate, London

This health training course, being offered by the Christian Medical Fellowship, is aimed at All healthcare professionals working or going to work in developing countries.

Course Content

Primary and secondary care, community and hospital based, paediatrics, infectious and tropical diseases, nutrition, family planning, dermatology, health education, ophthalmology and hospital management issues. .

More details available online at: www.eldis.org/go/topics/resource-guides/health/health-events-and-announcements&id=43353&type=Item

See the complete list of announcements at: www.eldis.org/go/topics/resource-guides/health/health-events-and-announcements

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- HIV and AIDS Resource Guide - <http://www.eldis.org/go/topics/resource-guides/hiv-and-aids>

The HRC provides access to technical assistance and information for the Department for International Development (DFID UK), and its partners, in support of pro-poor health policies as well as health systems, service delivery and public health topics and programmes.

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The views expressed in this newsletter and on the Eldis website are the opinion of the authors and do not necessarily reflect the view of Eldis, IDS or its funders.

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