HIV/AIDS & STI NEWS

From the DFID Knowledge Programme on HIV/AIDS & STI

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From the editorial board

This is the **newsletter** of the DFID* Knowledge Programme on HIV/AIDS and STIs. The Programme is funded by the Department for International Development, UK, and based at the London School of Hygiene and Tropical Medicine (LSHTM) and the Medical Research Council (MRC), Social and Public Health Sciences Unit (SPHSU), University of Glasgow. It has five Knowledge Areas: 1) Determinants of sexual behaviour; 2) Biological risk factors for HIV and STI transmission; 3) Factors affecting use and effectiveness of care and prevention services for HIV/AIDS and STIs; 4) Impact and cost-effectiveness of interventions against HIV and STIs; and 5) HIV/AIDS and STI prevention and care priorities and policies.

These newsletters provide a forum for the exchange of research within the Programme and introduce other relevant research from Programme members. They form a useful means to exchange information such as updates on projects underway, conferences, new grants, etc. Initially, the selected articles reflect the contents of our bi-annual scientific meetings in London (or Glasgow). Contributions from Programme members are invited. Please email comments and suggestions to: Tamsin.Kelk@lshtm.ac.uk. Also see the Programme's website at: http://www.lshtm.ac.uk/dfid/aids/

Philippe Mayaud, David Mabey, Graham Hart and Tamsin Kelk

In this issue

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International AIDS Conference 2004

Introduction

The **XV International AIDS Conference** took place in Bangkok, Thailand, from 11 to 16 July 2004. The theme of the conference was “Access for All”. About 20,000 people attended. This biennual event is the foremost conference on HIV/AIDS.

In this newsletter, 11 members of the Knowledge Programme give their impressions of the conference, and highlight the presentations they found particularly interesting.

Access for all

The main theme of the conference was "Access for All". Some of the key issues discussed included:

• ***Access to resources: commitment and accountability***
Progress in the fight against AIDS depends not only on scientific development, educational programmes and community support, but also on a commitment to act globally. The commitment of top leaders is vital. Leaders were urged to put aside political, personal and social differences, to continue fighting together; and to keep their promises *regarding access to treatment and care services* made during the XIV AIDS conference in Barcelona.

• ***Ensuring access for youth and women***
Youth, including those HIV infected, expressed concern about the need for more opportunities to access treatment and prevention services. They requested meaningful involvement in government and NGOs. As the most affected group, they need more opportunities to express themselves, not just to be represented on issues related to them.

With regard to women, biological factors explain why women and girls are disproportionately vulnerable to HIV infection, but social and economic disparities, coercion and violence are significant contributors to the increased likelihood of infection, factors which also influence the availability of and access to care and treatment for women and girls.

• ***Scaling up access to treatment***
This was a major topic at the conference and is discussed in the report below by Justin Parkhurst.

• ***Expanding options and access for prevention***
Zeda Rosenberg presented a paper on the development and use of microbicides. She explained how successful microbicides would make sexual protection and contraception more available to women. However, she confirmed that it will take 5 to 10 years to develop effective microbicides. Women have actively participated in clinical trials of microbicides in Ghana and South Africa and expressed willingness to use them once they are available.

Betty Chiduo-Stevenson, NIMR/AMREF/LSHTM Collaborative Projects, Mwanza, Tanzania

Scaling up access to ART

While conference organisers and plenary speakers emphasised a broad interpretation of ‘access’, the reality was a conference that discussed access to drug treatment on an unprecedented scale. ‘Scaling up’ was the order of the week, with multiple sessions each day addressing the topic. Scaling up, in this context, particularly meant increasing the numbers of individuals on antiretroviral therapy (ART). The WHO’s bold call for ‘3 by 5’ (3 million individuals on ART by 2005) was repeated continually.

Yet while the International AIDS Conference (IAC) is an effective forum to place items on the international agenda, and

to deliver political speeches, the content of the sessions dealing with scaling up ART showed there is still much to learn. Vast gaps in knowledge on how to scale up treatment, the realities of scaling up and the potential impacts (beneficial and detrimental) of ART provision were apparent. Despite a proliferation of presentations on scaling up, most were devoid of empirical evidence or analysis on these questions. Yet such research is crucially needed if countries are to go beyond the rhetoric that ART provision is necessary, and actually attempt to provide it.

One of the main challenges facing low-income countries is the issue of health systems strengthening. ART requires trained health workers to monitor patients on what can be complex drug regimens. Typically, laboratory tests are regularly required, with clinical monitoring of potential adverse reactions. Drug supplies must be ensured, with no breaks in availability. Finally, patients must be encouraged and equipped to adhere to drug regimens, often for years on end.

The content of the conference highlighted a real need for further research and investigation to ensure that not only does scaling up of ART happen, but that it is done in an effective, efficient, equitable and sustainable manner.

Justin Parkhurst, HPU, LSHTM

Young people at risk and making appropriate interventions available for them

Several studies have tried to understand what makes young people more vulnerable to HIV. Explanations range from cultural, biological to political factors. Many interventions with young people have been successful in increasing knowledge on HIV, but have had little impact in terms of changing behaviour. A study from Ethiopia indicated that although adolescents have high levels of knowledge on HIV/STI, most still engage in sexual risk behaviours. Other factors are not usually addressed by interventions, due partly to their complexity, for example, gender inequality, poverty and traditional values.

Many interventions targeting young people have been developed, but few have had proper input from young people themselves. Contextually appropriate interventions need to be developed. For instance, in a study with aborigines in Australia, an intervention on condom marketing increased condom uptake among young people through the design and marketing of a brand of condoms known as the 'snake'. The 'snake' branding was developed by the young people themselves, from the importance they attached to the snake. They also marketed the condom, which created a feeling of ownership of the 'snake' brand and made it appear fashionable to use the condoms.

Although this intervention was not set in sub-Saharan Africa (SSA), we could take from it something more widely applicable in SSA. Interventions intending to enhance condom use could involve young people in the development of brands they like and have symbolic significance to them, and then use locally popular marketing strategies. Interventions have to ensure a sense of ownership by the young people they are targeting.

In sum, any interventions targeting young people should be developed largely by input from young people themselves. This will need to be context specific.

Joyce Wamoyi, HALIRA, Mwanza, Tanzania

Parents and prevention

The potential role of parents in preventing HIV infection amongst young people was the subject of a few presentations.

Increasing evidence from Africa indicates that, as in developed countries, family composition is associated with sexual risk taking. Orphans (no parental involvement) are more likely to engage in early sexual activity and are more vulnerable to HIV (Murray et al. TuOrD1218; Richter et al. MoPeD3926). In a South African survey, the presence of both parents in the home was associated with less likelihood of sexual experience, more condom use and lower HIV prevalence (Hlongwa-Madikizela et al. TuOrC1154).

Communication about sexual issues was the main dimension of parent-child relationships reported on. Its limited nature was reported from Nigeria (Omoregie et al. TuPeC4836), Kenya (Otwoma et al. WePeD6397) and South Africa (Simbayi et al. ThPeD7780; Isong WePeE6718). A study from Ethiopia (Land, TuOrD1217) found that parental communication (presumably lack of) was one of the most reliable factors contributing to sexual risk behaviours. These presentations, and Beni's from Indonesia (ThPeD7767), imply that greater parent-child communication (PCC) of almost any kind about sex would be beneficial. In a US survey, Miller et al. (ThPeD7782) found mothers' communication about abstinence to be strongly associated with general skills in communicating about sex. Also from the US, Wilson et al. (ThPeD7835) reported that quality, not quantity, of PCC on sex was associated with less unprotected sex.

Of presentations relating to interventions, two came from the USA: one explored the potential role of paediatricians in promoting PCC about sexual risk reduction (Miller et al. ThPeD7781); the other reported on a programme to provide African-American parents with the information and skills to improve communication with their children (Long et al. LbOrD33). In Kenya, a US intervention has been adapted for the Luo to give parents the skills to educate their children about sex in the place of grandparents, now rarely able to fulfil this traditional role (Otwoma et al. WePeD6397). Similarly, in South Africa the *Champ Manual* has been translated to a different cultural context, described by Pequegnat et al. (SB117).

Also from South Africa, Isong (WePeE6718) described a sub-campaign of *loveLife*, designed to encourage parents to talk openly and knowledgably to their children about sex. From Nigeria, Adewusi (WePeD6464) presented strategies for improving PCC about HIV, while Eki (WePeD6519) reported on raising parents' awareness to discourage their involvement in trafficking their children to Europe.

Regrettably, the only outcome evaluation was from the USA (Long et al. LbOrD33), and many poster presentations from developing countries were absent, presumably reflecting the extremely high conference costs.

Daniel Wight, SPHSU, MRC Glasgow

Lack of attention to sexually transmitted infections

This was the first International AIDS Conference I had attended since Vancouver in 1996. I was disappointed to find that very little attention is now devoted to sexually transmitted infections, since the early international AIDS meetings included STIs in the title, and many interesting studies on STIs were presented.

The International Union against STIs held a meeting the week before the Bangkok AIDS conference, in Chiang Mai, at which an interesting paper on acute HIV infection in STI clinic attenders was presented by Dr Myron Cohen from the University of North Carolina. Dr Cohen became interested in acute HIV infection in STI clinic attenders during the course of his studies in Malawi. In the clinic where his group works, 47% of 1,361 male patients attending with an STI were HIV positive, that is, they had serum antibodies to HIV. 3.6% were found to be HIV antibody negative, but had been recently infected by HIV, and very high levels of the virus were detected in their blood (median viral load 1,000,000 copies per ml). Individuals such as this are highly infectious to their sexual contacts; yet if they request voluntary counselling and testing at the clinic, they are informed that they are HIV negative.

Dr Cohen's group tested many thousand STI clinic attenders in North Carolina for HIV infection by polymerase chain reaction (PCR), and found about 1% were acutely infected with HIV (PCR positive, antibody negative). His conclusion was that strenuous efforts should be made to identify subjects attending STI clinics with acute HIV infection, since such individuals play a disproportionate role in the transmission of HIV infection. He noted that in Malawi, a high proportion of them gave discordant results when tested with two HIV antibody tests in parallel, suggesting a relatively simple way of identifying these individuals.

David Mabey, CRU, LSHTM

The laboratory dimension

As a microbiologist by trade and now technical advisor to the National Institute for Medical Research laboratories, Mwanza, Tanzania, my interest at the recent IAC was firmly geared towards the laboratory environment. I was also hoping to find out more on the operational and capacity aspects of this sort of work, and how well the tools produced in developed countries translate to developing countries.

This was the first IAC I have managed to attend and my expectations were high. However, I am sorry to say I was a little disappointed because there was little of relevance to my areas of interest. Although generally informative, the conference was very politicised, with the focus on grand initiatives, such as '3 by 5', rather than debating the 'on the ground' issues.

That said, all was not bleak for fellow lab scientists. There were a few relevant poster presentations, outlining the concern over ever-expanding HIV programmes and the ever-increasing shortage of well-trained lab technicians and consumables to cope with the additional workload. From my blinkered perspective, this sort of issue is clearly not sexy enough, yet it is incredibly important that the lab infrastructure, staffing levels and logistical support are all in place before we embark on grand initiatives.

Sour grapes? I don't think so; I like to think of it more as a much needed dose of realism. The sexy stuff can only work when the boring stuff can fully support it. What is the use of vaccine initiatives and ARV programmes if the local labs are inadequate to give the support needed to ensure success? Strengthening capacity in developing countries is not always high on the agenda, but it should be there nonetheless.

Dean Everett, NIMR, Mwanza, Tanzania

Affordable CD4 counting systems are needed

Various studies have demonstrated that programmes which include affordable diagnosis, treatment and prophylaxis of HIV/AIDS in Africa are highly effective in improving the quality of life of people living with HIV/AIDS. For a long time, the bone of contention had been easy accessibility to antiretroviral therapy (ART), due mostly to the high cost of antiretrovirals (ARVs). However, as access to ART improves with the decrease in ARV cost, an already existing limiting factor is becoming apparent; monitoring the immune status of patients by CD4 counts. CD4 cell counts are important in deciding on the commencement of ART, on when to start antimicrobial prophylaxis against opportunistic pathogens and on subsequent continuation and/or switching of ARVs. Flow cytometry (FCM) is the gold standard technique for CD4 determinations. But current FCM systems are costly, and require highly developed infrastructure, sophisticated laboratories and highly skilled labour.

Various approaches purporting to be cheaper FCM alternatives were showcased at Bangkok. One was a Cyflow FCM system in combination with a new "no lyse, no wash" preparation protocol. The authors claim this reduces the cost of CD4 testing by a factor of 20. Another was the EasyCD4 system, also claimed to be developing country friendly.

Whilst these developments are exciting, it is important to state the obvious: such equipment/kits should not only be affordable, their technical specifications and performance characteristics need to enable their use in most centres (not only in big cities with electricity etc). Manufacturers should look at the feasibility of setting up sub-regional centres to offer training and prompt after-sales services in terms of repairs and maintenance.

It is hoped that the interest in developing these 'resource-poor setting friendly' CD4 diagnostics is not just in response to the increasing donor funding of treatment programmes, but that sustainable, good quality products will be developed which will not suffer the fate of recently delisted ARV agents.

Yaw Adu-Sarkodie, CRU, LSHTM

Comparative research methodologies in sub-Saharan Africa

Collection of valid data on sexual behaviour in sub-Saharan Africa (SSA) is difficult for various reasons, e.g. the sensitive nature of sexual behaviour, poor infrastructure, participant illiteracy. Given such challenges, studies have attempted to evaluate the relative effectiveness of different methods (Mukaka et al. MoPeD3958; Plummer et al. MoPeD3973). Substantial inconsistencies were found between self-reported sexual behaviour data collected via quantitative methods, and that collected qualitatively. Generally, reports of sensitive behaviours were higher with qualitative methods. These studies and others found that triangulating qualitative and quantitative data improved the overall quality of results (Adedimeji et al. D12782; Ogunyemi & Okunola TuPeD5223).

Some researchers have tried to develop more effective techniques to improve the quality of data and research in general, including simplifying instruments for semi-literate populations (Allen et al. MoPeD3991; Milford et al. ThPeC7582; Plummer et al. above) and adapting computerised interviewing for resource-poor settings. Mukoma et al. (TuPeC4886) tested the feasibility, acceptability and reliability of using palm pilots to evaluate the sexual behaviour of South African students. Compared with a paper questionnaire, participants using palm pilots made fewer errors, had fewer missing responses, and most perceived the palm pilot as more confidential and fun. Waruru et al. (WeOrC1252) found that, compared with face-to-face interviewing, Audio Computer-Assisted Self-Interviewing (ACASI) increased responses to sensitive questions, decreased socially desirable responses, and prevented null responses.

On the potential to collect subtle and complex information in SSA, Klein & Coombes (MoPeD3992) used focus group discussions and pilot interviews in 4 countries to develop a sexual partner trust, caution and assurances measurement scale. They found that complex social and psychological measurement scales can be used in low literacy populations when precautions are taken to prevent polarization of responses on a scale. Jackson et al. (WePeD6304) examined whether self efficacy can be meaningfully measured in Tanzania, and found that interactions, reliability and interview data supported the applicability of their self efficacy scale in that context.

Mary Plummer, IDEU, LSHTM

How informed is informed consent?

With the rapid growth in large-scale clinical trials, the ethical requirements of Good Clinical Practice must be adhered to. These guidelines include specific instructions on informed consent procedures. However, public engagement with clinical trials is often not sufficiently understood. So, how informed is informed consent?

The IAC 2004 reflected the concern for study-led engagement. Community mobilisation and the development of Community Advisory Boards or Groups are increasing in popularity in the preparation for vaccine and microbicide trials. Both Goliath et al. (C11935) and Zhou et al. (E12018) emphasised the need for community preparedness and involvement to create an enabling environment for vaccine trials.

Others have gone further in developing tools for improving informed consent. Milford et al. (ThPeC7582) argued that check-lists should not be relied on to measure potential participants' understanding. They examined understanding of critical concepts using 4 instruments (a self-report measure, a true-false checklist, narratives and vignettes), and recommended collaboration and consultation with participants in the development of methods to assess understanding. The development of discussion groups in preparation for enrolment in clinical trials was also recommended by Vardas et al. (ThPeC7436).

The need for meaningful and culturally sensitive tools was emphasised (e.g. Woodsong et al. ThPeC7583; Friedland et al. ThPeC7585). To optimise effectiveness, these tools should be used as part of community activities with either a lead discussant encouraging people to ask questions (Thaitawat et al. C12745) or combined with peer outreach or roundtables with study staff (Ghee et al. TuPeE5450).

Presentations on formative research for informed consent in clinical trials and on evaluations of informed consent procedures were fewer, reflecting a need for greater rigour in preparation and monitoring. Guest et al. (WePeD6416) stressed the need for research into socio-cultural factors important to informed consent prior to any clinical trial. Corneli et al. (WeOrD1247) noted that formative research is necessary to determine local explanations and methods for enhancing understanding, and that modifying informed consent to be culturally specific may enhance understanding. Despite concerns expressed by some, e.g. Eziefule et al. (TuPeB4474), many concluded that informed consent in terms of understanding of study procedures was feasible, and that obtaining valid informed consent for research in developing countries is possible (Duncombe et al. C11743).

There were no presentations on public engagement with trials or on public perceptions and priorities in decision-making about participation. To ensure a truly informed cohort for participation in clinical trials, further research on participant and community perceptions of such trials is needed.

Nicola Desmond, HALIRA, Mwanza, Tanzania

Critique of the Behavioural Paradigm: AIDS and the Ecology of Poverty by Eileen Stillwaggon, presented at the International AIDS Economics Network, Bangkok

Obsession with behavioural change has led to short-sighted emergency interventions focusing on the reduction of sexual risk behaviour and other potential risky behaviours, rather than the fundamental causes of HIV transmission, such as poverty.

Stillwaggon argues that poverty-related diseases may contribute largely to the higher HIV disease burden in developing countries. She claims that many infectious diseases lead to higher viral loads and shedding, such as malaria, leishmaniasis, worms and genital schistosomiasis. The latter has clinical manifestations very similar to those of STIs (genital ulcers) but is rarely mentioned as a potential co-factor in HIV transmission. Everyday activities, such as washing clothes in slowly moving water and not having a latrine, may lead to higher prevalences in poor areas and contribute to the global distribution of AIDS.

Rather than looking at models that include sexual risk alone to simulate HIV epidemics, new models of HIV transmission should also include non-sexual risk factors, such as poor nutrition and the abovementioned diseases. Treatments for these other risk factors are very cheap, and with political will, interventions can easily be implemented.

This presentation led to much discussion. Attendees views ranged from 'refreshing and plausible new perspective' to dismissing the paper as filled with 'looney ideas'. Personally I am not sure of the scientific basis for her arguments, but they sound plausible enough. Is this a new area for future research?

Fern Terris-Prestholt, HPU, LSHTM

Working together? Some Bangkok highlights

Donor behaviour

There were some interesting sessions on the role of donors, spurred on in part by the PEPFAR controversies. A general discussion was held around 'donor behaviour'. A senior member of Malawi's Ministry of Health spoke on how, in Malawi, donors are too involved in day-to-day activities of programmes, which disempowers the country coordination committee. He also noted that the 'civil servants' representing donors at the country level have very little authority to dispense funds, so their requests are transferred to headquarters where staff are often removed from individual country priorities and strategies, being driven instead by their country ideology around development.

A representative for Randall Tobias of PEPFAR presented what sounded like a US government press release on the PEPFAR and all the numbers they have generated. He faced many questions regarding concerns that PEPFAR is sidelining the Global Fund.

Global problem solving in the 21st century

Jean-François Rischard, author of 'High Noon', looked at the wider world context in which HIV sits and at two powerful forces facing the planet – population increase and the new economy – and the growing gap between them. The worst consequence of this gap is the non-resolution of global issues, listed as greenhouse gas emissions, deforestation, biodiversity loss, fisheries depletion, poverty (half the world's population live on less than $2/day), water shortages and financial instability. He proposed three solutions: 1) sharing the planet; 2) sharing our humanity, and 3) sharing a common rule-book. He showed how there is no anticipatory long-term planning, especially regarding HIV/AIDS, and proposed the formation of a Global Issue Network composed of government, international civil society and business, as a possible channel for change.

Monique Oliff, CRU, LSHTM & RHRU, Johannesburg

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Publications

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