Letters

A theme issue by, for, and about Africa

Results from Ugandan programme preventing maternal transmission of HIV

EDITOR—Since the efficacy of antiretroviral drugs in preventing HIV transmission from mother to child was first shown, much effort has been devoted in many countries in Africa to implement sustainable regimens.[1–4] To identify potential reasons affecting uptake we evaluated the five year performance of a programme at St Francis Hospital Nsambya in Kampala, Uganda. The programme included voluntary counselling and confidential HIV testing for pregnant women and administration of antiretroviral prophylaxis in the peripartum period (zidovudine or nevirapine) for HIV positive women.

Overall 24 133 women received counselling, 76% (18 384) agreed to be tested, and 2011 (10.9%) were HIV positive; 1341 (66.7% of the HIV positive women) were enrolled in the programme and received antiretroviral drugs.

Acceptance of the test increased from 72.7% (9103/12 524) in 2000-2 to 79.9% (9281/11 609) in 2003-4, when a drug access programme became available in the hospital.

Acceptance of the test and enrolment in the programme were lower in married or cohabitating women (test acceptance rate 72.9% (7735/10 605)) than single women (78% (860/1106)), indicating that the fear of being identified as HIV positive in the family is still a strong limiting factor and that men could have an important role. Acceptance of the test was lower in women belonging to the local tribe in Kampala (Baganda), probably because of fear of being recognised by hospital health workers.

Higher education was associated with a lower prevalence of HIV and a higher enrolment in the programme, confirming that education can have a key role not only in protecting against HIV but also in allowing HIV positive people to benefit from existing measures against the spread of HIV.

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Competing interests: None declared.

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New injecting practice increases HIV risk among drug users in Tanzania

EDITOR—Female sex workers who inject heroin in Dar es Salaam, Tanzania, have created a new needle sharing practice they call "flashblood." This entails drawing the first blood back in a syringe until the barrel is full and then passing the needle and syringe to a female companion. Women believe that about 4 cm^3 of such blood contains enough heroin to help them escape the pains of withdrawal. They developed this practice in mid-2005 in an altruistic attempt to help one another. Male injectors are unaware of this practice. These data are based on ongoing interviews with 63 injecting drug users.

Research on the relation between drug injection and HIV transmission has long focused on the serial use of syringes or needles, practices such as "backloading," and reuse of paraphernalia before injecting.[1–3] Flashblood is a new phenomenon that is, in a sense, a dangerous exaggeration of needle sharing that magnifies HIV transmission risk. If the first injector is infected with HIV or hepatitis C virus the amount of virus directly transmitted into the bloodstream by the second injector could be quite large.

The rationale for the practice may be the price and quality of heroin. Since 2003 the price of heroin has doubled. Once pure, it is now reportedly adulterated. Now a *kete* costs $1, and injectors reportedly need two to get high. Most female injectors are sex workers, and the more successful are helping the more desperate with flashblood. The women who accept flashblood are also the most likely to agree to clients' frequent requests to forgo condoms.

Injection drug use emerged in East Africa during the past five to six years, and it is spreading rapidly throughout the region.[4 5] If flashblood spreads to other cities in East Africa, its impact on the rate of transmission of HIV and hepatitis C virus could be substantial.

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Palliative care and antiretroviral treatment can be integrated

EDITOR—An estimated 80m AIDS related deaths will occur in Africa by 2025.[1] As antiretroviral treatment expands in sub-Saharan Africa, the World Health Organization advocates its integration with palliative care because pain, other distressing symptoms, and complex psychosocial challenges persist throughout the HIV trajectory.[2] Palliative care improves outcomes for patients with HIV[3] and in Africa may complement antiretroviral treatment by increasing adherence through managing side effects, providing patient and family centred holistic care, and giving end of life care when necessary.[4] However, reintegrating what have become two distinct disciplines is challenging.[5]

Hospice Africa Uganda was founded to provide affordable control of pain and symptoms, including oral morphine, and to develop a model of palliative care appropriate to Africa. It provides advocacy and training across Africa, education, and specialist palliative care in rural and urban settings alongside community volunteers and traditional healers; it also has links with clinics giving antiretroviral treatment.

We evaluated the success of integrated care by reviewing patients' files for new refer-

rals to the hospice from March to August 2004. Of 311 referrals, 106 had HIV; 39 were accessing antiretroviral treatment at referral, and a further 12 had accessed treatment but defaulted. The primary reasons for referral of the 39 accessing treatment were severe pain (32), skin rash (4), diarrhoea (2), and nausea and vomiting (1).

Morphine had been accessed by 10 of the 106 patients with HIV before referral and was initiated by the hospice for a further 72 patients at their first visit. Chemoprophylaxis was initiated for 73 patients, 46 requiring treatment for opportunistic infections. Of the 67 patients not accessing antiretroviral treatment at referral, 45 were referred to a clinic for treatment.

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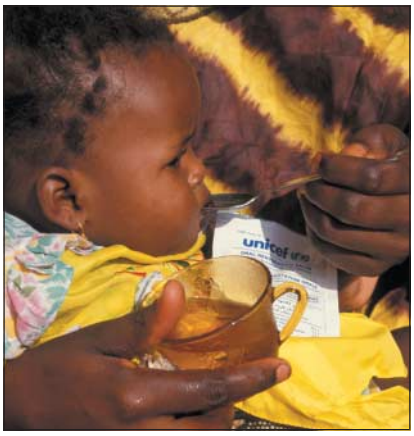
Maternal mortality in rural Burkina Faso

Editor—Volmink et al identify maternal mortality as an important health challenge in Africa.[1] Using a census approach with one year recall we estimated the maternal mortality ratio in a population of 44 000 women of childbearing age in Houndé, a rural district in Burkina Faso, to be 406 maternal deaths per 100 000 live births (95% confidence interval 281 to 566). This is probably an underestimate, based as it is on recall and verbal autopsy. We probably missed some deaths altogether and may have misclassified some maternal deaths as not maternal because only 15% of all deaths among women of childbearing age were classified as maternal—a low percentage compared with other reports from similar settings.[2]

Nevertheless this figure is 40 times higher than in Europe or north America. With a total fertility rate estimated at 6, the lifetime risk of maternal death for a woman in this population entering the reproductive period is one in 35.[3] Many of these deaths could be prevented with simple interventions: of the 34 maternal deaths identified, 10 were due to haemorrhage, seven to sepsis, and four to prolonged labour.

Overall 58.8% of the families commonly reported delays in making the decision to seek care, obtain transport, or receive care. The district hospital does not have the



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facilities for blood transfusion, and the cost to a family of a caesarean section is $100-200, against an average monthly household income of $4.[4] Poverty is thus a real barrier to progress in reducing maternal mortality.[1]

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Collaborative work between Nigeria and UK on breast cancer has been successful

Editor—Breast cancer is a rapidly emerging disease in Africa.[1] It has similar implications for African women as HIV, but it receives little attention in terms of publicity, funding (both overseas and internally), and local research. Affected women are young and poor and present with late stage disease. Five year survival is 5-15% compared with over 60% in developed countries.[2 3] The disease is controlled by mutilating surgery. Without prosthetic support, the patient rapidly loses self esteem and may die young.

We encountered many challenges with research governance in studying the pattern of occurrence and molecular genetic variations of breast cancer in Nigeria and the UK.[4] Ethics approval in Nigeria is not well structured. Existing consent forms are generic and do not cover special collaborations such as genetic studies. Tracing patients to request consent for the use of archive material is difficult. Post and telecommunications do not always work. Record keeping and data retrieval have deficiencies. Lack of accurate, supporting databases such as cancer registries,[5] population census, and demography make interpretation of research information difficult.

We collected data from multiple sources to bridge the gap in supporting databases.[4] Couriers were used for transporting appropriately package samples as well as messages. To insist that the same ethical requirements of developed countries are to be fulfilled by African collaborators may be impractical. Often, consideration has to be made for the many peculiar situations that exist while still protecting the "best interests" of patients. The safeguard is to plan research that allows for all of these problems rather than to encounter them midway through.

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Tackling the challenge of diabetes

Editor—Diabetes is one of Africa's emerging challenges.[1] This foundation has tackled the problems that patients in three countries in Africa face in accessing care and insulin. It used a rapid assessment protocol, which enabled data to be collected at all levels of the system, from health ministries to individual patients. The results from Mozambique and Zambia highlight the high cost of insulin to the system and patients.[2]

Although the average price per 10 ml vial of U100 insulin in the public sector in Mozambique and Zambia was around $2-3, supplies were intermittent—and insulin cost over $15.00 per vial (about a month's need) in the private sector. Problems also affected access to syringes and diagnostic tools. Only 6% of health facilities surveyed in Mozambique had facilities for blood glucose measurement, compared with 25% in Zambia.

These hurdles in accessing supplies were compounded by a paucity of trained healthcare workers. Consequently, the life

expectancy of a child with newly diagnosed type 1 diabetes is only 0.6 years in rural Mozambique.[2]

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South Africa is still blighted by trauma

Editor—Our hospital (close to the urban slum areas of central Johannesburg) has seen an increase in volumes of patients with multiple injuries. Between 1997 and 2004 the intake of patients requiring resuscitation for life threatening trauma at our unit increased by 56%. Penetrating injury now accounts for nearly 60% of this workload.

Substance abuse is a common factor and, in a recent study of patients with major trauma from our institution, 59% were positive for blood alcohol.[1] The average blood alcohol concentration was more than three times the legal limit for driving, and more than 40% of the patients were positive for urinary cannabis.

Over 90% of our unit's nursing and medical staff have experienced verbal abuse, 75% have been threatened with violence, and 42% have experienced violence from patients in the previous two years.[2] In addition, serial exposure to critical incidents increases the risk of burnout. Staff lose their ability to feel emotionally involved in their work and develop a cynical attitude towards patients, resulting in compromised care, dissatisfaction, and high turnover. Our centre attracts foreign healthcare practitioners who work in the unit for short periods of time. This is a mutually beneficial arrangement, but local staff are our backbone, and we can ill afford them to leave to work in other, less stressful environments locally or overseas. Nurses particularly have to deal with distressing events, violent patients, and work in an environment of high HIV seroprevalence (37% in a series of major trauma patients in 2002).[3]

Africa is blighted by trauma, and efforts are required at all levels to ensure that development proceeds with injury reduction strategies. Meanwhile hospital authorities should recognise the high stress for health workers and improve the provision of care for them.

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Africa's medical brain drain

Brain gain and brain circulation result when drain is reversed

Editor—As Africa begins to unshackle itself from the ravages of decades of dictatorship governments, efforts must be made to tap the massive potentials in Africans abroad either by way of a full return to home or structured, periodic visits (brain circulation).

With democratisation and good governance in Africa, Africans will revert to what happened before the 1980s, when they emigrated only for knowledge and skills and promptly returned to their home country, better equipped and knowledgeable to serve mother Africa (brain gain).

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Competing interests: None declared.

Why I want to stay in Africa

Editor—The prevailing view is that all African trained health workers want to get out of their countries as soon as possible. I don't, for the following six reasons.

- The experience I get in Africa is far richer than that in the United Kingdom or United States. My logbook shows the number of supervised operations I have performed, and the outcomes of these, and shows how I have rapidly and competently evolved to performing major surgery on my own. I have seen the logbooks of registrars of comparable seniority in the UK and elsewhere, and there is no comparison.
- The colleagues I know who have gone abroad often develop low level depression. They are distanced from their families and culture, get sun deprivation, and may be subject to covert racism, often manifest in difficulty getting suitable jobs.
- I live among my relatives, and am supported by them.
- I can also easily relate to my rural home, some 450 km north east of Lusaka. Like so many of my local colleagues, I have a plot there where I can grow food, and build, if I feel so inclined, a house.
- Although my pay is poor, I have enough money to live in a reasonable house in Lusaka, and with the support of my family and friends am sustained through the long hours I work.
- I get much joy from serving my own community, and much gratitude from them. Given the shortage of doctors in Africa, the local people need my services, arguably more than peoples of privileged communities. I have also been helped through my education by the people, who through their taxes and community commitment support the public hospitals in which we are trained.

These compelling reasons to stay in Africa do not argue against the need to resolve the issues of the skills drain. I strongly support the need to find ways of compensating Africa for the money spent on training health workers who leave Africa to work abroad.

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Summary of responses to recent editorial on stopping Africa's brain drain

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The 20-odd international responses to Johnson's editorial on stopping Africa's medical brain drain agreed that the brain drain is an inescapable reality for the countries of Africa (although India and other parts of Asia were also mentioned or implied).[1] Some correspondents proffered possible reasons or attributed blame; some suggested possible solutions; some saw advantages to "medical migration"; and many raised pertinent questions.

Few correspondents simply "blamed" developed countries for luring the talent away from developing countries. Many of them with African or Asian names found fault with their own countries for not being able to keep talented health professionals. The reasons included general poverty and poor working conditions resulting from local health policies and depleted economies—some of which were laid at the door of the countries' governments but some were attributed to greedy rich countries, whose trade arrangements (in arms, among other things) keep fuelling social conflict.

Individual doctors were understood to be striving for a better life elsewhere—some for themselves and for personal gain, but many so that they could better support their families who had been left behind. Doctors and nurses also desired and needed better training, which poor countries cannot satisfy.

Among the practical solutions proffered were an ethical recruitment policy whereby no medical professionals would be taken on from countries that did not have a surplus (similar to what happens in Cuba); training rotations and exchange programmes in the UK and the US for doctors from developing countries; the abolition of poverty to improve countries' economies and reduce migration; the standardisation of doctors' pay worldwide to counteract merely financial motives; training all doctors in developing countries, where the costs would be lower and sufficient medical professionals could be trained for all countries in the world; paying "rent" for medical graduates whom developed countries "borrow" from developing ones; and so on on.

Many correspondents agreed, however, that the brain drain is essentially an intractable dilemma. As Richard Rosin, consultant psychiatrist in Seattle, points out: "Society needs doctors, and there is always somewhere where conditions are worse. Given these factors there is no end in sight to the brain drain."

And even if developed countries did not need any more doctors from abroad, they would still have a moral responsibility not to keep trained medical workers out even if they produced enough of their own, finds family doctor Richard Lyus from Seattle.

Andrew Wilson, radiation oncologist from Cape Town, smells a form of latter day colonialism: "Why do qualified people (of all professions/trades) seek to leave Africa? Simply put, it is for a better future for them, and especially their children. It is their basic human right to do so. Your editorial is sadly quite typical of the UK's chattering classes, people who demand freedom and rights for themselves, and yet will happily acquiesce to the effective enslavement of others in some grand social engineering scheme."

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Competing interests: None declared.

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Issues arising from lobby of UN to outlaw circumcision

Editor—Hopkins Tanne's news item on a US group lobbying the UN to outlaw circumcision conflates two unrelated stories into one.[1] The first is Hess's call for UN action to declare male circumcision a human rights violation, the second the self described, randomised controlled trial of circumcision by Auvert et al to prevent transmission of HIV from women to men.[2] The *Wall Street Journal* reports that the *Lancet* refused to print this report, so only the scant information from the abstract is available.[3] The private peer review at the *Lancet* that resulted in a refusal to print the article is not encouraging, and public scrutiny is therefore speculative.

Several observations, however, are possible from the abstract. The study purports to be a randomised controlled trial, yet the men were not selected at random. Auvert et al eliminated those men who were not willing to be circumcised, so selection has entered into the picture.[2]

The Auvert study claims circumcision reduces but does not eliminate infection with HIV.[2] The authors terminated the study early. Had the study continued for its planned length, it would probably have shown that circumcision merely delays infection.

In the Auvert study doctors tracked black men while they became infected with HIV. Apparently, the participants were not given or allowed to use condoms because this would have disturbed the experiment. This is reminiscent of the infamous Tuskegee syphilis study, in which newly discovered penicillin was withheld so that the study could continue.[4]

If Auvert et al ultimately plan to subject children to circumcision in an effort to prevent HIV infection, this would be unacceptable from a human rights and ethical perspective.[5] Bioethics requires the most conservative treatment,[5] and condoms and sex education must therefore be preferred.

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Making dirty water drinkable

Kitchen garden scheme is alternative …

Editor—We suggest an alternative way of improving water quality,[1] which we have tried to teach on a couple of projects: most recently in Maharashtra, India, together with the Israeli Medical Cadets Organisation and the Israeli Ministry of Foreign Affairs. This is an integrative method with a number of positive effects besides its potential for improving water.

All human, animal, and vegetable waste must be composted in a place not vulnerable to run-off. This should immediately have an effect on locally caused water pollution from human and animal waste.[2] It cannot prevent polluted water coming from elsewhere. It can help reduce parasite infection in children and others going barefoot around "night soil."

If the material is first composted anaerobically, it can be used to make biogas for cooking, reducing the health dangers of smoke in poorly ventilated homes.[3] Biogas plant projects are underway in India, Nepal, Africa, and elsewhere.[4 5]

After the biogas potential is exhausted through anaerobic composting, the material can then be composted aerobically for garden fertiliser. During our 2001 health survey in Velhe Block doctors told us that one of the main health problems of villagers is lack of vitamins and minerals, which can be supplied by a kitchen garden.[w1]

The kitchen garden scheme may provide a partial but important solution to problems of polluted water, parasites, smoke inhalation, and nutrition. This solution can help many, but not all. In the Palar River Delta of Tamil-Nadu the water supply arrives badly polluted from cities further north. In Bangladesh deep drilled wells, which were supposed to solve the problem of contaminated surface water, are contaminated with arsenic.[w2]

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References w1 and w2 are on bmj.com

… as is the drumstick tree

Editor—Pure potable drinking water is premium even in metropolitan areas in developing and underdeveloped countries.[1] Although chlorination at source and during storage is extensively used by city corporations and municipalities in India, in interior and rural settings, most if not all water for personal use is drawn from wells or village tanks and ponds. Village authorities rarely address the serious and perennial problem to health and hygiene from the consumption and use of contaminated water.

The drumstick tree, *Moringa oleifera*, is found all over India, its product, the drumstick, being used extensively to add flavour, tang, and spice to native recipes. In some of the more enterprising *panchayats* (locally elected, administrative bodies consisting of five people), the common drumstick produce has been used for its water purification properties.

Branches of the tree are lopped and thrown into turbid and contaminated wells—where, over a period of time, the once dirty water turns clear. Desiccated drumstick seeds (about 1 g/l) clear water.

We are studying the effect of drumstick seed powder as a "flocculant catalyst" to hasten the time taken for measuring erythrocyte sedimentation rate in diagnostic procedures.

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1 Crump JA, Otieno PO, Slutsker L, Keswick BH, Rosen DH, Hoekstra RM, et al. Household based treatment of drinking water with flocculant-disinfectant for preventing diarrhoea in areas with turbid source water in rural western Kenya: cluster randomised controlled trial. *BMJ* 2005;331:478. (3 September.)

Relevant references are available on bmj.com