Bulletin of the World Health Organization

Volume 87, Number 11, November 2009, 805–884

Special theme: strengthening linkages between sexual and reproductive health and HIV

Bulletin of the World Health Organization

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Printed in Switzerland. ISSN 0042-9686

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Front cover photo: health-care worker advising women about reproductive health issues in Bangladesh.

Credit: WHO/Abir Abdullah

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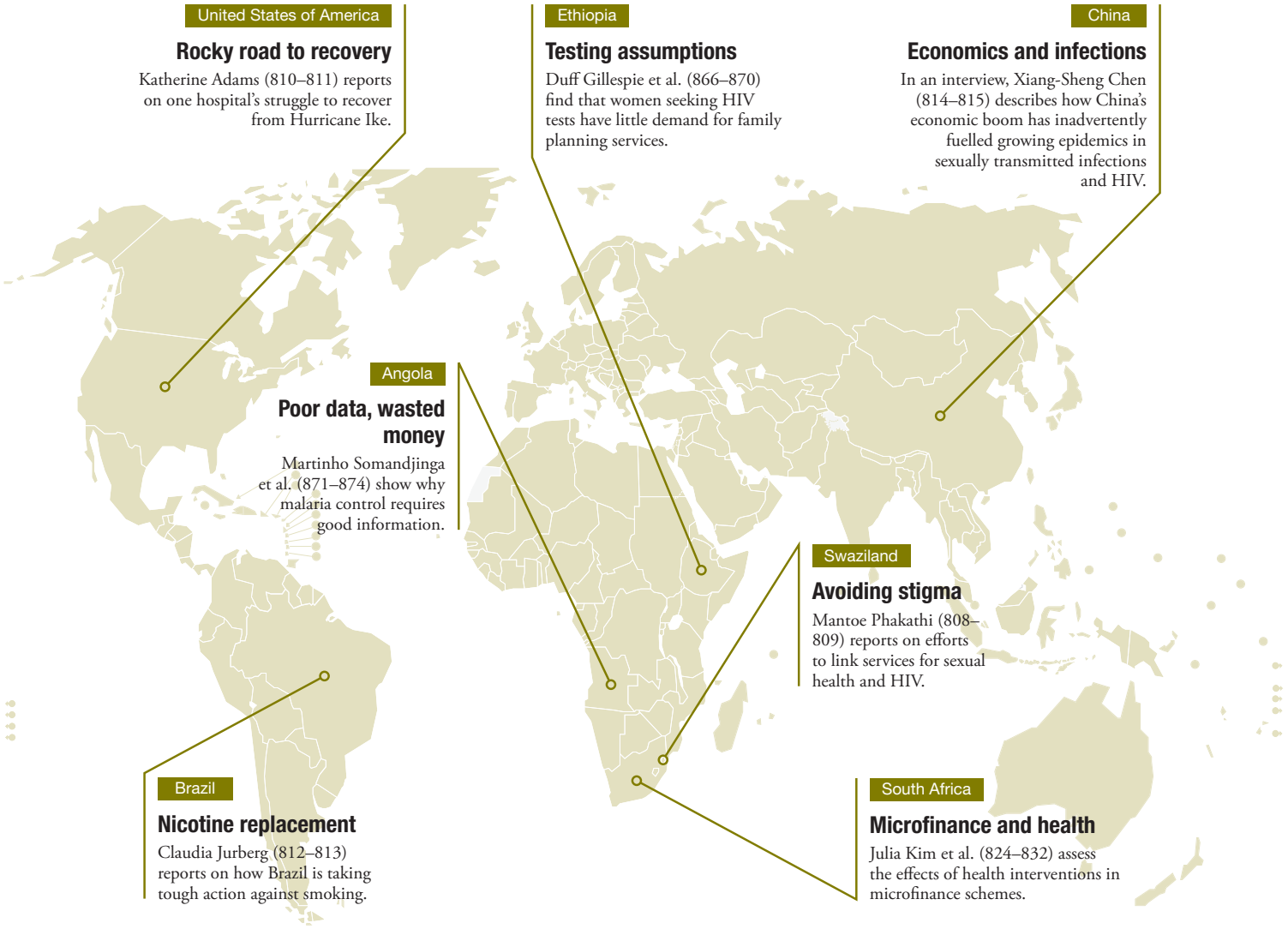
In this month's *Bulletin*

Many papers in this month's issue address the **special theme of strengthening the linkages between sexual and reproductive health and HIV**. In the lead editorial, Michel Sidibé & Kent Buse (806) explain why these links are crucial to public health.

In a second editorial, Diarmid Campbell-Lendrum & Manjula Lusti-Narasimhan (807), commenting on the paper by Leo Bryant et al. (852–857), discuss the controversial issue of linking climate change with family planning.



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Rocky road to recovery

Katherine Adams (810–811) reports on one hospital's struggle to recover from Hurricane Ike.

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Funding patterns

Manjula Lusti-Narasimhan et al. (816–823) find that most proposals approved by the Global Fund reflect the links between sexual and reproductive health and HIV.

Back to basics

Adrienne Germain et al. (840–845) argue that HIV services need to be integrated with sexual and reproductive health programmes.

Sexually transmitted infections and HIV

Richard Steen et al. (858–865) discuss how the control of sexually transmitted infections helps reduce HIV transmission.

Progress and problems

Clare Dickinson et al. (846–851) provide a progress report on efforts to combine services for sexual and reproductive health and HIV.

Climate change and population

Leo Bryant et al. (852–857) discuss how family-planning services may affect developing countries' contributions to climate change.

Respecting rights

Kevin Moody (875–876) calls for an end to discrimination against men who have sex with men and against people living with HIV.

Choices for women with HIV

Rose Wilcher & Willard Cates (833–839) address the reproductive health needs of HIV-positive women.

Involving young people

Raoul Fransen-dos Santos (877–879) says that young people are often overlooked in AIDS strategies.

Environment risky for health

Eva A Rehfuess et al. (880–882) discuss the role of the health sector in developing environmental policies.

Strength in unity

Michel Sidibé[a] & Kent Buse[a]

Recent increases in resources for achieving the goal of universal access to HIV prevention, treatment, care and support have given renewed impetus to the longer-standing political commitment for achieving targets in sexual and reproductive health and rights. As a result, we see increasing optimism that progress on these interdependent goals can be achieved – particularly if they are tackled together.

The AIDS response has been remarkably successful in transforming a deafening demand for inclusive policy processes and evidence-informed, rights-based programmes into tangible achievements measured in lives saved and dignity restored. The most visible manifestations of these achievements are the more than 4 million people presently on antiretroviral treatment and the tremendous advances in overcoming the stigma and discrimination faced by people who inject drugs, men who have sex with men, and sex workers and their clients.

It is encouraging to see evidence that well designed AIDS responses can and do strengthen health systems.[1] Nonetheless, evidence also confirms that greater and more systematic efforts must be made to take AIDS responses out of isolation to support wider health, development and human rights agendas.

Fostering improved linkages is also critical to the AIDS response. Despite treatment successes, we will not turn the tide on the epidemic, which sees five new people infected with HIV for every two individuals starting treatment, unless prevention is intensified. This can be achieved in part through service integration, which achieves more cost-effective resource allocation and responds to peoples' desires for a seamless and comprehensive continuum of care.

There are several linkages between HIV and sexual and reproductive health responses. Services to virtually eliminate mother-to-child HIV transmission provide an ideal platform to deliver the entire recommended minimum package of antenatal, maternal, child health and reproductive health services. This would ensure that pregnant women are not only offered HIV screening, but that they and their partners are also offered services to prevent HIV and other sexually transmitted infections, unwanted pregnancies and sexual violence.

Calls for integration are not new. The global community reached consensus on the need to provide holistic sexual and reproductive health services as far back as 1994 with the Programme of Action of the International Conference on Population and Development. The need has been further reaffirmed in important global declarations since then – notably the United Nations Political Declaration on HIV/AIDS of 2006.

Increased integration is intuitively appealing and enjoys a great deal of scientific support for the benefits it can deliver.[2] These include increasing coverage, and thereby access, at lower cost as well as improving quality of care and acceptability for often stigmatized conditions. WHO, the United Nations Population Fund, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and other partners have supported countries to increase service integration within national programmes.[3]

It is no coincidence, therefore, that many of UNAIDS current corporate priorities, including to reduce sexual transmission of HIV, stop violence against women and girls, remove punitive laws and promote human rights, and empower youth, provide strategic entry points to strengthen linkages between HIV and sexual and reproductive health responses, as Gillespie et al. (866–870), Steen et al. (858–865) and Fransen (877–879) demonstrate in this theme issue.

However, as Dickinson et al. (846–851) argue, exploiting linkages has too often been the exception rather than the rule. Integration has been held back by several factors. For example, parallel funding streams for disease-specific programmes have not provided incentives for operational integration but are perceived as being more tightly controlled financially than integrated services.[4] Vertical programmes may develop technical guidance and lists of essential drugs that are condition specific and pay little attention to related areas in sexual and reproductive health and rights. Professional and cultural rivalries often present further barriers.

Accomplishing integration of HIV and sexual and reproductive health programmes demands an honest recognition of the political, not just the operational, barriers, and the willingness of donors, international agencies and programme managers to address actively the political blockages and change the way that they themselves do business.[5]

Yet successful integration also depends on demand from below. In renewing primary health care, more emphasis needs to be placed on family-centred services and communities – ensuring greater accountability and voice.

Civil society, the driving force behind the AIDS response, has shaken up global health. Its support is crucial to foster integration of HIV and sexual and reproductive health and rights programmes. Given political commitment, the moment is right to take the AIDS response out of isolation. We see signs of such commitment in the International Health Partnership, in President Obama's Global Health Initiative, in the new Partnership Frameworks of the United States President's Emergency Plan for AIDS Relief, and in the joint approach of the Global Fund to Fight AIDS, Tuberculosis and Malaria, The World Bank and the GAVI Alliance to supporting sustainable and cost-effective health systems.

The time has come to unite the forces of the global AIDS movement with other constituencies to ensure that people have universal access to integrated and comprehensive prevention, treatment, care and support that is rights-based, equitable and effective. ■

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Available at: http://www.who.int/bulletin/volumes/87/11/09-071621/en/index.html

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Taking the heat out of the population and climate debate

Diarmid Campbell-Lendrum[a] & Manjula Lusti-Narasimhan[b]

Climate change and population, taken individually, are among the most contentious issues in public policy; bringing the two issues together is a recipe for controversy. The paper by Bryant et al. (852–857) in this issue[1] points towards a more constructive approach to addressing these linked concerns.

For all of its complexities, the basic challenge of climate-change policy is the apparent conflict between the drive to maximize short-term individual or national gains (increasing per capita GDP through use of cheap fossil fuel energy) and the need for long-term protection of shared benefits (reducing climate change and minimizing global damage to natural and human systems).

Closely tied to this is the issue of fairness. Those populations that have contributed least to past emissions of greenhouse gases are most vulnerable to the impacts of climate change, including on population health.[2,3] The governments of developing countries are therefore reluctant to commit to limits on greenhouse gas emissions to help solve a problem that has, so far, been created elsewhere. For their part, the governments of richer countries generally acknowledge their responsibility to take a lead in combating climate change, but hesitate in implementing policies that they consider may harm short-term economic growth and hamper their competitiveness against rapidly developing economies.

Some aspects of this debate find analogies in discussion of population policy. Again, there is a potential tension between the immediate rights of individuals (to control their own fertility) and a longer-term, population-level concern (that rapid population growth could potentially overstretch natural and socioeconomic resources, hamper development and lay conditions for conflict).

These two issues are also closely linked, but discussing them together has often generated more heat than light. Although the major driver of greenhouse gas emissions remains the consumption patterns of richer populations, human population is also a fundamental determinant of this trend. However, even stating the fairly obvious fact that an individual's number of children makes a major contribution to their "legacy" of greenhouse gas emissions[4] has sparked outraged reaction in some quarters.

Population growth is also fastest in developing countries, leading to suggestions that this should be the starting point to reduce climate change. In response, developing countries point out that per capita emissions of children born in poor countries are, and are likely to remain, much lower than those in richer countries, and claim that they are being stigmatized for "profligate reproductive behaviour" as a negotiating position over greenhouse gas commitments.[5]

Can these issues be discussed constructively? The best approach is probably to choose the least controversial entry point – identifying where human rights, health, environmental and equity objectives converge, rather than conflict. This can be framed around the fact that, in developing countries, approximately 200 million women express an unmet need for family planning services.[6] Meeting this need is supported by the following arguments.

First, control over reproduction is an individual right, supported through the landmark Programme of Action of the 1994 International Conference on Population and Development. Improved access to reproductive health services is also a Millennium Development Goal. Second, it provides major public health benefits; systematic reviews across multiple countries show that increasing birth spacing from less than 18 to more than 36 months correlates with a two-thirds drop in childhood mortality.[7] Third, reducing local overpopulation decreases vulnerability to near-term environmental and other stresses. Fourth, over the long-term, it relieves climate change and other pressures on the global environment.[8]

Other studies have already identified improved access to reproductive health services as one of several "win-win" interventions that can both improve individual well-being and reduce climate change.[9–11] The paper by Bryant et al., however, is the first to provide strong support for the third point – showing that the majority of the least-developed countries cite population pressure as an important determinant of their vulnerability to climate change. The fact that the affected countries themselves identify this as a local priority avoids the conflict that comes from framing population regulation as a way of reducing global greenhouse gas emissions.

When developing this case, the order of the arguments is critically important. Individual rights come first, with the population health, local and global environmental benefits as welcome and important co-benefits. In contrast, using the need to reduce climate change as a justification for curbing the fertility of individual women at best provokes controversy and, at worst, provides a mandate to suppress individual freedoms.

This new paper is an important contribution in its own right. It is also a reminder that, although the case for family planning services should be self-evident, it needs to be carefully constructed and sensitively handled. ■

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Available at: http://www.who.int/bulletin/volumes/87/11/09-072652/en/index.html

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Integrating sexual health services in Swaziland

There are compelling arguments for integrating sexual and reproductive health and HIV/AIDS health services in Swaziland, but also a risk that it will discourage patients from seeking help. Mantoe Phakathi reports.

Almost 10% of the population of Swaziland – more than 100 000 people – were treated for sexually transmitted infections (STIs) in 2008, according to Zandile Mnisi, STI programme coordinator at the Swaziland Ministry of Health. Alarming in itself, the number is also indicative of prevailing high-risk sexual practices in a country that has the highest HIV prevalence in the world. According to a UNAIDS report, preliminary data from a population-based survey show that about one in four (26%) Swazis aged 15–49 years is HIV positive.

Swazi authorities are trying to address these problems by pushing for greater integration of the sexual and reproductive health and HIV/AIDS services offered in hospitals and clinics. This is done by providing STI services at all entry points in the health facilities, Mnisi explains. "For example, pregnant women who come for antenatal care services are screened and treated for STIs, and the same goes for women who come in for family planning services. Children who are brought in for growth monitoring are also examined for the presence of STIs and treated if any are detected."

WHO/Mantoe Phakathi

Rejoice Nkambule, deputy director of Health Services (Public Health) at the Swaziland Ministry of Health.

There is already a degree of integration in this area. Dudu Simelane, director of the Family Life Association of Swaziland, a nongovernmental organization that provides reproductive health care services, says that all patients who come for STI diagnosis, treatment or any other reproductive health service are offered an HIV test, while patients in Swaziland's antiretroviral therapy clinics receive treatment for STIs. This is true both for public health facilities and those run by nongovernmental organizations.

The country's hospitals do less well in offering integrated services than the clinics. "As a country we have a challenge in the integration of services, both in the approach and delivery," says Rejoice Nkambule, deputy director of Health Services (Public Health) at the Ministry of Health, noting that the STI unit in a Swazi hospital is typically separate from the voluntary counselling and testing centre devoted to HIV/AIDS. Nkambule would like to see this change, but is aware of the challenges – notably the problem of increased waiting times for patients in units offering a broader range of services, and the risk of health worker burnout.

> "In this part of the world, the fact is that HIV is mainly transmitted through sex."
>
> *Rejoice Nkambule*

For Dr Velephi Okello, medical practitioner and national coordinator of the HIV/AIDS treatment programme at the Ministry of Health, improving integration need not be a painful process. "We're saying let the STI corner have HIV services such as testing and counselling with personnel trained to deliver all the services at one place," she says, pointing out that the different services combine quite naturally anyway. "The first thing that comes to my mind when I see a patient with a sexually transmitted infection is that this person is not using protection therefore there is a high risk of exposure to HIV," she says, adding that STIs present an "entry point to start talking about HIV/AIDS". This viewpoint is shared by Simelane, who says that the main infection prevention mechanisms are also similar – promotion of condom use, reduction in sexual partners or promotion of abstinence.

WHO/Mantoe Phakathi

Letticia Bennett, senior nursing sister at the Family Life Association of Swaziland

But is it really that simple? Anecdotal evidence suggests that it might not be, and that the differences between STIs and HIV/AIDS are as important as the similarities. One of the most obvious differences concerns prognosis. HIV/AIDS, while no longer necessarily a death sentence, is still certainly a

Bull World Health Organ 2009;87:808–809 | doi:10.2471/BLT.09.011109

lifelong disease, whereas STIs tend to be acute and easily treatable. Patients are well aware of this difference and it influences their choices, according to Letticia Bennett, senior nursing sister at the Family Life Association of Swaziland.

Patients presenting with STI symptoms at the Family Life Association of Swaziland clinics are offered HIV/AIDS counselling and testing services at the same time and those who accept are given their results immediately. Despite this fact, roughly 40% of the patients refuse to test for HIV. Why? It is not a matter of price. It costs roughly US$ 2.50 for the initial HIV test, while charges for STIs range between US$ 4 and US$ 9 because of the cost of the medication. "They are just interested in being treated for the presenting symptoms," says Bennett. Put simply, they would rather not know. Okello too has observed the phenomenon, saying that in her experience as a doctor, she has found that "most people have undergone some kind of counselling and opted out of testing [for HIV]". The idea that a patient can be treated for their STI without knowing their HIV status, adds Simelane, "is a fallacy and creates false hope…[as] STI treatment with an underlying [unknown] HIV infection would not have a sustainable effect".

In public health facilities, health workers are expected to offer HIV counselling and testing to all patients without the patient having to ask. Nkambule explains that patients still have the right to refuse an HIV test, but there can be little doubt that the approach puts the pressure on, and may run the risk of discouraging people with STIs from coming in for treatment in the first place. According to Mnisi, the Swaziland government is still working on finalizing its Pharmacy Act. The current lack of a policy regulating the circulation of drugs in the country makes it possible for STI patients to buy medication over-the-counter, with all the risks that entails for irrational use. The last thing those patients need is another excuse to stay away from the doctor.

WHO/Mantoe Phakathi

Zandile Mnisi, STI programme coordinator at the Swaziland Ministry of Health.

> "Treating HIV as a sexually transmitted disease perpetuates stigma and discrimination."
>
> *Velephi Okello*

Meanwhile, people who wish to know their HIV status may be discouraged from entering integrated units fearing the stigma associated with STIs. Nkambule recognizes the potential problem here, but believes linking HIV to STIs simply reflects the epidemiological reality of sub-Saharan Africa: "Treating HIV primarily as a sexually transmitted disease might promote stigma and discrimination but, in this part of the world, the fact is that HIV is mainly transmitted through sex," she says. Okello, on the other hand, points out that mother-to-child transmission alone invalidates any framing of HIV as a sexually transmitted infection.

"Treating HIV as a sexually transmitted disease perpetuates stigma and discrimination," she says. "Can you imagine how much it would hurt the children, some of them teenagers now, who have been living with HIV since birth if HIV was considered an STI when some of them are not even sexually active?"

WHO/Mantoe Phakathi

Velephi Okello, medical practitioner and national coordinator of the HIV/AIDS treatment programme at the Swaziland Ministry of Health.

Finally, there is the question of the effect a push for greater integration will have on the male population. Mnisi points out that most people accessing treatment at the moment are women. STI patients are given partner-tracing cards, which are effectively an invitation to the infected person's partner to come in for treatment. The partners rarely do. For men who have sex with men, the issue is even more difficult because homosexuality is illegal in Swaziland. "We try to talk to our health workers to be tolerant," said Mnisi. "However, you must understand that, in our culture, homosexuality is not practised openly so people are not used to it." Nevertheless, she says, "our core mandate as a health sector is to provide equitable non-discriminatory health services to all members of the general population irrespective of their sexual orientation and practices. The same thing applies to people in the commercial sex trade." It is perhaps only by changing attitudes that Swaziland will start to see a significant decline in its appalling HIV and STI statistics. ■

Hospital safety: Texas dodged a bullet

One year after hurricane Ike hit the coast of Texas in the United States of America, the evacuation of John Sealy Hospital in Galveston is held up as an example of how to ensure patient safety during a crisis: one that almost shut down the entire state's hospital system. Katherine Adams reports.

Hurricane Ike was just one disaster among many in 2008, a year in which 235 816 people died in such events – Cyclone Nargis in Myanmar and the Sichuan earthquake in south-western China being the most notable. Hospital safety has been under the spotlight this year with the World Disaster Reduction Campaign, World Health Day and the International Day for Disaster Reduction on 14 October 2009 all highlighting the importance of safe hospitals during disasters. While high winds and earthquakes tend to grab the headlines, it is flooding that most frequently devastates, as has been demonstrated by the recent typhoon in the Philippines. It was flood water that wrecked the John Sealy Hospital.

Wedged in among the buildings of the University of Texas Medical Branch (UTMB) on Galveston Island, the twelve-storey hospital was hit by a wall of water driven across the island by winds of up to 180 kilometres per hour in the early hours of 13 September 2008. Gushing in through doors and windows, it inundated the basement and ground floor, destroying the blood bank, sterile processing laboratory and pharmacy and taking out the electrical and ventilation systems, along with phone lines, computer systems and elevators.

> "The lack of water pressure to hospitals in Houston during the immediate post-disaster period almost resulted in one of the largest patient evacuations in history."
>
> *Scott Lillibridge*

Surprisingly nobody was injured. Credit for this goes in part to local authorities for issuing a mandatory evacuation order in time for a pre-agreed evacuation plan to be carried out. Hospital and city employees shut down the entire UMTB campus, secured laboratories and made arrangements to send around 400 patients, including 51 newborns from the neonatal unit and 14 organ transplant patients, by ambulance or helicopter to waiting hospitals further inland.

Dr Luca Cicalese, director of the Texas Transplant Center at John Sealy, headed up a team responsible for getting the organ transplant patients out, some of whom were still in intensive care as the storm closed in. "We had just a few hours to complete the evacuation," says Cicalese. "Patients were out by Thursday and the storm made landfall Friday [night]." Despite the time pressure, there was no panic or confusion because of what Cicalese terms, "excellent leadership, communication and coordination". His wife, Dr Cristiana Rastellini, director of Cell Transplant and Transplant Research at John Sealy, cites orderliness and speed as having been crucial for saving transplant patients, who were hooked up to "every kind of machine". She also stresses the importance of forward planning for saving her laboratories.

One reason UTMB survived the storm so well is that it had been through it all before. Back in 2005, hurricane Rita passed close enough to the island to trigger Galveston's evacuation plan, an event that Mike Megna, one of two Institutional Emergency Preparedness officers at UTMB, says taught staff and administrators several important lessons. "We have reassessed our vulnerability to flooding and consequently [since Ike] have not returned any mission-critical functions to first floor [ground floor] space," says Megna. He also stresses the importance of having an adaptable game plan, and making sure personnel are not just mentally but also physically prepared for post-hurricane conditions, including the challenge posed by the shut-down of elevators, air-conditioning and water supply. Running up and down a twelve-storey building in 40 °C heat is not for the faint-of-heart or the out-of-shape.

Preparing staff for water loss in a flooded hospital may seem odd on the face of it, but it goes to the heart of one of the biggest challenges faced by hospitals in crisis situations triggered by natural disasters. Simply put, there is a limit to what an individual hospital can achieve without support from

Courtesy of UTMB

One of 51 babies evacuated before the storm.

surrounding hospitals and emergency services, but even that support can be compromised in natural disasters, which tend to have a regional rather than local impact on the utilities that run the hospitals.

Scott Lillibridge, professor of epidemiology at Texas A&M University, located 70 kilometres north of Galveston, saw precisely how close the hospitals of the Houston region, which includes Galveston, came to collapsing as a result of broad systemic failure. Lillibridge's office was mobilized by the state health department to help during the storm, and participated in the initial hospital assessments of the region which revealed that 20 out of 170 hospitals over an area greater than 320 square kilometres had been badly damaged, with 17 requiring evacuation.

> "Before we invest over US$ 600 million in repairs, we have to evaluate choices about what comes back and how it can be brought back in a more durable and sustainable way."
>
> *Michael Shriner*

For Lillibridge, the main source of concern was the Texas Medical Center, a collection of more than 45 hospitals and institutions located in Houston, employing more than 90 000 health-care workers. While Houston did not take the brunt of the storm the way Galveston did, Ike did knock out the city's water pumping systems, and that was sufficient to threaten the whole health-care system. In the words of Lillibridge: "The lack of water pressure to hospitals in Houston during the immediate post-disaster period almost resulted in one of the largest patient evacuations in history."

UTMB

Flood waters destroyed the electrical and telecommunications systems of the hospital.

There was no wall of water, no howling winds; just the sound of taps drying up and toilets ceasing to flush. "Without water for toilets, laundry and food service the hospitals were down to their last 24 hours of patient services before throwing in the towel," Lillibridge says. As bad as this was, worse was threatened. According to Lillibridge, there was not enough bed capacity in the entire state to receive patients from Texas Medical Center. Says Lillibridge: "[The hospitals] absolutely could not have gone [on] one more day."

And it wasn't just the water that almost dried up in Texas. Because there were no more patients at UTMB, there was also no more income. This sudden loss of its revenue stream, along with US$ 125 million in unpaid patient bills, was enough to send it into a financial tailspin and prompted a highly controversial staff reduction of more than 2500 employees, including professors, doctors and researchers. In the 12 months following the hurricane, the hospital has struggled back to financial health, with a US$ 150 million contribution from the state government and US$ 450 million from the Federal Emergency Management Agency. "The total repair estimated for the campus is over US$ 667 million," says Michael Shriner, vice-president of Business Operations and Facilities at UTMB. "We were not operating in the black before the storm because so many of our patients were indigent. Before we invest over US$ 600 million in repairs, we have to evaluate choices about what comes back and how it can be brought back in a more durable and sustainable way."

"Durable" and "sustainable"; the words are at the forefront of the current debate on health-care reform in the USA. It remains to be seen whether they inform the bill President Barack Obama is eventually handed to sign. In the meantime, Texas has shown that it knows how to plan for future natural disasters and that it is capable of carrying out its rescue and relief operation for its hospital system.

Find out more about what international organizations are doing to make hospitals safe from disasters at: http://www.safehospitals.info/ ■

Brazil and tobacco use: a hard nut to crack

Brazil is pushing to enforce smoking bans and backing nicotine replacement therapies in an attempt to keep chipping away at tobacco-use statistics. Raising the price of cigarettes would also help. Claudia Jurberg reports.

Taxes on tobacco products generated income of around US$ 2.2 billion for the Brazilian government in 2008, but that doesn't mean the Brazilian government is going easy on the tobacco industry.

For the past two decades, Brazil has been at the forefront of global tobacco control initiatives. Vera da Costa e Silva, a public health specialist who advises the government on tobacco control, is proud to note that Brazil was the first country to ban the use of misleading adjectives such as "light" and "mild" from cigarette packages back in 2001. That move was in line with a law passed a year earlier requiring cigarette manufacturers to include pictorial health warnings covering at least 100% of one of the two main sides of a pack. These warnings often depict people in advanced stages of tobacco-related illness.

As a result of such initiatives, smoking prevalence has come down in the past two decades from 34% of the adult population in 1989 to 15% last year, according to the Brazilian Ministry of Health. But the declining trend has tailed off over the past few years as tobacco companies target new consumers, notably women. Meanwhile, 200 000 Brazilians die every year from tobacco-related diseases, according to the National Cancer Institute (INCA).

One area in which Brazilian tobacco control has faltered is in the enforcement of other key tobacco control measures, such as smoking bans in enclosed public places. Although Brazil ratified the WHO Framework Convention on Tobacco Control in 2005, requiring the country to pass laws to restrict tobacco, it has not done this. For that reason, many states and municipalities have taken matters into their own hands by passing their own laws banning smoking from public places with no separate places designated for smokers. However, these by-laws have been challenged as "unconstitutional" by the hospitality industry and could be overturned by the supreme court.

So far four states and eight municipalities have introduced smoking bans in a process that Costa e Silva characterizes as "a domino effect".

In August, a big "domino" went down when the state of São Paulo passed its own law banning smoking in enclosed public places. Previous attempts to ban smoking in São Paulo have failed as a result of weak enforcement and public apathy, but this time things may be different. São Paulo state health secretary, Luiz Roberto Barradas Barata, says that 99.5% of the state's pubs, restaurants and hotels are committed to upholding the law. "In the last month, we monitored 37 000 places and applied only 198 fines," he says. Establishments in breach of the ban are fined up to US$ 750 for a first offence, with the fine doubling for a repeat offence. A third breach entails closure of the business for 48 hours and a fourth shuts it down for 30 days.

Not everyone is happy about the bans. Alexandre Sampaio, president of the Pubs, Restaurants and Hotels Syndicate in the state of Rio de Janeiro claims that such initiatives are unconstitutional. He says that Rio's hospitality industry has suffered a 20% decline in visits to restaurants and bars as a result of the ban, which the state legislature passed into law but that has yet to come into force. He also argues that the government should be committing resources to informing the public, teenagers in particular, about the dangers of smoking, rather than restricting the spaces in which people can smoke. "In a few years we would have fewer smokers," he says.

Of course, while banning smoking in public places protects the health of non-smokers, many smokers need more than bans to help them quit. On the cessation front, Brazil is throwing its weight behind nicotine replacement therapies – a move strongly endorsed by the World Health Organization (WHO), which in May of this year put nicotine replacement therapy on the Essential Medicines List (EML).

"This is a public health victory," according to Costa e Silva, who believes that this recent decision by WHO will encourage Brazil and other countries to see nicotine replacement therapy as equally important as any other drug used for prevention purposes and promote cheaper commercial forms of nicotine replacement therapies.

Currently, 10% of the more than 5000 municipalities in Brazil offer

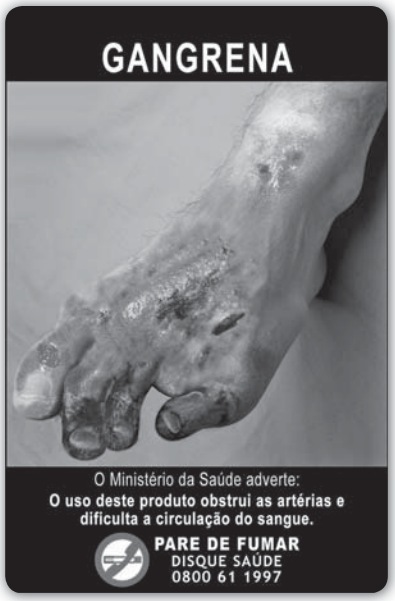
Courtesy of the Ministry of Health in Brazil

Edson Santos (third from left) at a tobacco cessation therapy session. Participants do exercises like this to relax and prevent anxiety.

cessation treatment based on psychological counselling that is sometimes combined with nicotine replacement therapy, such as patches, gum and the antidepressant bupropion. Since 2002, this cessation treatment has been available free through the public health system, and according to Costa e Silva, 40% of people who received nicotine replacement therapy say they had quit smoking by the end of the first month – although she thinks the true figure is closer to 30%.

The assistance department at INCA runs a Nicotine Addiction Research Center (NARC) that tests methods and drugs to help cancer patients quit. It also helps patients' families and INCA workers quit smoking. Head of the centre Cristina Cantarino says it gives 75 new patients a six-month course of treatment that includes six counselling sessions of 90 minutes combined with either nicotine gum, patches or bupropion. Cantarino claims the programme enjoys a 67% success rate.

Edson Santos is one of NARC's success stories. The 71-year-old is one of a group of 13 people receiving treatment there. He has smoked since he was 10 years old and says that when he arrived at INCA, he thought he would have to stay there for the rest of his life because he weighed only 39 kilos and suffered from severe shortness of breath. "I gained six kilos in a few weeks, because before this treatment I only drank coffee and smoked at breakfast, lunch and dinner. Now my breathing is much better and I can climb the stairs. I am another person," he says.



WHO/Claudia Jurberg

Disturbing image in Brazilian poster campaign.

Of course not everyone does so well. People like Eliane Belleza, a journalist specializing in health issues, who has been a regular smoker for the last 27 years: "I did five different treatments," Belleza says. However, they did not work for her and she has since given up trying. "I know that I am a sick person, because smoking cigarettes is a disease, but I cannot abandon this pleasure."

What would it take for an educated person like Belleza to give up? Even harsher images on cigarette packages? Some are calling for both sides of a pack to carry such images, arguing that smokers simply put their pack image face-down when they want to enjoy a cigarette.

According to a recent World Bank report on tobacco control, the last steep drop in tobacco use in Brazil was between the first quarter of 1991 and the fourth quarter of 1993, when real prices increased by 78.6% and consumption dropped by over a fifth. The report recommends a return to 1993 pricing policy, estimating that such an increase would reduce consumption by about 11% or roughly 100 legal cigarettes per capita per year. Tania Cavalcante, National Coordinator of the Brazilian Programme to Control Tobacco also believes significant reductions in consumption might follow a price hike. She says that over the last two years Brazil has increased taxes, which in turn have made cigarettes more expensive. "The excise tax on cigarettes increased by 30% and this

WHO/Claudia Jurberg

Vera da Costa e Silva

was reflected in a 24% increase in cigarette prices," Cavalcante says, adding: "Hopefully this will encourage people to smoke less, but we can still do more in this respect – cigarettes sold in Brazil are still some of the cheapest in the world."

Costa e Silva argues that Brazil needs to enforce key tobacco control measures to succeed in stopping more people from starting to smoke, helping smokers quit and protecting non-smokers from second-hand smoke but she says that national legislation on this has been thwarted by Brazil's tobacco interests.

"We need to stop industry interfering in Brazil's national anti-tobacco policies," says Costa e Silva, explaining that industry interference – such as creating front groups in the hospitality industry – is also covered by the WHO Framework Convention on Tobacco Control. She says that it should be made more difficult for tobacco industry lobbyists to gain access to government ministries. "The relationships need to be more transparent. When the industry has a meeting with a government minister, this should be announced. There are rules for all kinds of contributions to politicians. But we believe that many donations are not publicly disclosed." ■

One stone to kill two birds

Courtesy of Prof. Xiang-Sheng Chen

Prof. Xiang-Sheng Chen

Professor Xiang-Sheng Chen is deputy director of the National Center for Sexually Transmitted Diseases Control at the Center for Disease Control and Prevention (CDC) in China. He received his medical degree in 1984 from the Southeast University School of Medicine, followed by a doctorate in dermatology and venereology in 1998 from the Peking Union Medical College in China. He has led many studies on the prevention and control of sexually transmitted infections (STIs), in particular the links between STI prevention and care and HIV prevention in China. He is a member of several national and international committees on STI and HIV research and control.

China's economic boom has triggered mass migration of rural workers to cities in search of higher incomes and better opportunities. This trend over the past two decades is a major factor in the resurgence of STIs in China. Reporter Cui Weiyuan talks to Professor Xiang-Sheng Chen about how detection and care of STIs can and should be linked to that of HIV.

Q: Why is China experiencing a re-emergence of syphilis?

A: China had 278 215 officially reported syphilis cases in 2008, tripling the number of cases reported in 2004. This is a tenfold increase over the past decade, according to statistics from China's STI surveillance system. On average, syphilis cases are increasing by 30% a year across the nation. China virtually eradicated syphilis in the 1960s through a powerful campaign of propaganda, mass screening, closing brothels and providing free treatment for sex workers. But the epidemic has re-emerged since the economic boom of the 1980s. We don't know whether the first case of syphilis in 1979 was imported or not, but we know that the resurgence of syphilis was driven by prostitution, migration of workers and poor health controls. Migrant workers, mainly young men who have left their wives back in their home towns, make up much of the clientele of low-tier sex workers. These sex workers frequently provide services and are less aware of the risks of STIs, such as syphilis and HIV, compared with their higher-tier counterparts working in star-rated hotels. It is difficult to promote condom use among these individuals, as they are poorly educated and some cannot even afford a condom. Men who have sex with men are also a high-risk group. A national survey in 2008 found that 11.9% of this group were infected with syphilis, while 4.9% were HIV positive. [These data were presented in the National Conference of HIV and STI in 2009 by the Chinese health authorities.] The areas with higher syphilis prevalence are usually places where the economy is booming but where there is also greater economic inequality, such as the south-eastern coastal areas.

Q: What are the challenges working in this field?

A: When visiting entertainment parlours to screen female sex workers for syphilis, my staff and I often receive wariness, mistrust, hostility and even verbal or physical harassment from their "bodyguards". In China, the outreach team consists of people mainly from the local CDC, and sometimes also from the local hospitals. We have to be patient, friendly and show them respect. Once we gain their trust, we find that many female sex workers are not only interested in learning about HIV or syphilis, but they often ask questions about maternal health, abortion and so on. We then added a reproductive health consulting service to the HIV/STI education during our regular visits. Many female sex workers would not hesitate to visit a specialized doctor, but say they can't afford it because they serve very poor clients and are no better off themselves. In this case, we need to provide a summary of the real costs and benefits of seeking care, an analysis most sex workers have not considered. We need to put ourselves in their shoes. It takes time and lots of effort to build up trust. But we manage it in the end.

Q: How is China dealing with people's unwillingness to visit STI clinics?

A: People who visit these departments in public hospitals often face social stigma. Their privacy and confidentiality are not very well protected. Also, the high cost of testing and treatment and limited opening hours make these services less accessible. In recent years China has introduced reforms. For instance, most public hospitals have put their STI departments under the dermatology department. In general hospitals in cities, maternal or women's health units provide limited HIV and other STI testing services. Many clinics have a separate space for checking and screening to protect outpatients' privacy and make the process more humane. A system of keeping records confidential is also being established. Despite these efforts, more than half of China's STI patients do not visit these places. We have tried hard to encourage sex workers and clients at entertainment parlours to go to the clinics for testing, but many do not believe they might be infected. Currently, my institute – in collaboration with WHO – is offering point-of-care syphilis testing, providing results in 15 to 20 minutes. It enables testing at non-traditional venues, avoiding the stigma attached to visiting STI clinics. If a person needs treatment, our staff can make prompt referrals. Our study showed us that prevention and screening is needed not only at the "barbers' shops" (brothels), massage parlours and karaoke bars. We discovered that many of the high-risk low-tier sex workers serve clients on the street, in rented rooms or in dilapidated houses on the urban fringes. We need to provide comprehensive prevention and screening to these neighbourhoods where migrant workers and the urban poor live. In addition, we are piloting a project to see whether provision of such syphilis testing can be used as an entry point to encourage the clients for HIV testing.

Bull World Health Organ 2009;87:814–815 | doi:10.2471/BLT.09.041109

Q: Are HIV and STI services integrated in China?

A: The link between HIV care and detection services for other STIs in China is weak. Syphilis testing is included in some HIV voluntary counselling and testing programmes, but that is the extent of the connection in many places. No other STIs are included. Some maternal and child health-care centres are planning to integrate syphilis into their treatment packages, but lack the funding to do so. Syphilis screening and detection services are integrated into some HIV prevention and control programmes, mainly implemented by the China CDC's programmes for high-risk groups. But this only helps us to understand the spread of the disease, since little care for syphilis is provided following the testing.

Q: Do many people in China have both HIV and other STIs?

A: There are no national statistics on this because the HIV reporting system and that of other STIs are separate. But it appears that HIV combined with other STIs, especially syphilis, is on the rise in high-risk groups. One reason is that HIV and other STIs can be sexually transmitted, while HIV and other STIs encourage each other's spread. For example, someone with HIV and an ulcerative STI – such as syphilis, genital herpes or chancroid – can transmit HIV more easily. It is also more difficult to treat the STIs contracted by people infected with HIV. Indeed, this combination can accelerate the spread of both HIV and other STIs, and worsens both epidemics. Moreover, in some areas many female sex workers are also drug users and are at high risk of contracting HIV and other STIs. We need to reinforce the control of other STIs, which are mostly curable, to help prevent and detect HIV.

Q: What programmes are in place to raise awareness of HIV and STI prevention?

A: A public awareness campaign has been conducted across China to educate people about safe sex and HIV/AIDS, particularly over the past decade. This involved public interest television spots, theatrical performances, posters in public places and school education in safe sex, etc. Education programmes that focus on high-risk groups are also a major part of national HIV prevention campaigns. There are prevention programmes that reach out to migrant workers, in the workplace and at the entertainment parlours where they are the patrons. Also, promotion of condom use among high-risk groups allows us to kill two birds with one stone, with regard to preventing sexually transmitted HIV and other STIs.

Q: What are the challenges in effective prevention, care and treatment for STIs and/or HIV?

A: There are many challenges. First, these epidemics are on the rise in China, but the policies for STI prevention, care and treatment are still being developed. Second, although the central government has called for cooperation between relevant departments, conflicts of interest between departments, such as those responsible for public health and public security, may think differently about the services needed to reach drug users and sex workers. Third, the public health system is divided on how best to tackle disease control and prevention. From the disease control perspective, we believe that detection and treatment of STIs should be decentralized, but hospital administrations push for resources for STIs to be centralized and concentrated in their hospitals. Public awareness campaigns about STIs are not given as high a priority as they should. Unlike many Western countries, China does not have an STI public health programme – which it should have. Fourth, state policy has focused mainly on HIV/AIDS. Little attention has been paid to other STIs and their STI testing and treatment are regarded by health service providers as a source of profits. It is essential to have public policies that prioritize prevention, intervention and treatment of STIs to improve the cooperation between different departments and within the public health system, and to allocate resources for STI issues, rather than commercializing these services. ■

Recent news from WHO

- Global campaigns to fight **diarrhoea** – the second-deadliest illness for children – must be re-energized to prevent the deaths of millions in the developing world, the United Nations Children's Fund (UNICEF) and World Health Organization (WHO) said on 14 October as they released a new report on the disease. Read the report here: http://www.who.int/child_adolescent_health/documents/9789241598415/en/index.html
- More than 4 million people in low- and middle-income countries were receiving **antiretroviral therapy** at the end of 2008. This represents a 36% increase in one year and a ten-fold increase over five years, according to a new report released on 30 September by WHO, UNICEF and the Joint United Nations Programme on HIV/AIDS (UNAIDS). Read the report here: http://www.who.int/hiv/pub/2009progressreport/en/index.html

For more about these and other WHO news items please see: http://www.who.int/mediacentre

Sexual and reproductive health in HIV-related proposals supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria

Manjula Lusti-Narasimhan,[a] Camille Collin[a] & Michael Mbizvo[a]

Objective To assess the sexual and reproductive health interventions included by countries in HIV-related proposals approved by the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund).

Methods We examined the Global Fund database for elements and indicators of sexual and reproductive health in all approved HIV-related proposals (214) submitted by 134 countries, from rounds 1 to 7, and in an illustrative sample of 35 grant agreements.

Findings At least 70% of the HIV-related proposals included one or more of the four broad elements: sexual and reproductive health information, education and communication; condom promotion/distribution; diagnosis and treatment of sexually transmitted infections; and prevention of mother-to-child transmission of HIV. Between 20% and 30% included sexual health counselling, gender-based violence, and the linking of voluntary counselling and testing for HIV with sexual and reproductive health services. Less than 20% focused on adolescent sexual and reproductive health, the rights and needs of people living with HIV, or safe abortion services. All these elements were rarely featured, if at all, in the grant agreements reviewed. Overall, however, sexual and reproductive health indicators did appear in most HIV-related proposals and in more than 80% of the grant agreements.

Conclusion Country coordinating mechanisms and national-level stakeholders see in funding for sexual and reproductive health a means to address the problem of HIV infection in their respective national settings. However, we highlight some missed opportunities for linking HIV and sexual and reproductive health services.

Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

In recent years, advocacy efforts have been targeted towards promoting the support of sexual and reproductive health within HIV-related proposals submitted to the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund). In 2008, the independent Technical Review Panel of the Global Fund recommended that technical assistance to countries for proposal development place greater emphasis on potential opportunities for integration and synergy between sexual and reproductive health and HIV/AIDS, since HIV infection is acquired and transmitted largely through unprotected sexual intercourse or during pregnancy, childbirth and breastfeeding.[1] Promoting sexual and reproductive health is therefore important for ensuring that people have the knowledge and ability to protect themselves against not only sexually transmitted infections (STIs), including HIV infection, but also, importantly, against unintended pregnancies. Moreover, people living with HIV who have access to antiretroviral therapy are leading longer, healthier lives and require services that meet their sexual and reproductive health needs while respecting their rights.

The Global Fund, which is one of the largest supporters of HIV/AIDS programmes worldwide, is committed to country ownership of programmes that evolve from national plans and priorities. Thus, investment by the Global Fund in sexual and reproductive health is essential in helping countries control their epidemic of HIV infection. Although HIV/AIDS programmes receive substantial funding from various initiatives and agencies, including the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the President's Emergency Plan for AIDS Relief (PEPFAR), the Global Fund alone disbursed over 4 billion United States dollars (US$) between December 2002 and November 2008 to fund HIV control programmes. By the end of 2008, it had committed a total of 13.2 billion US$ for HIV control at the country level.[2]

We performed an in-depth analysis of the sexual and reproductive health elements contained in HIV-related proposals approved by the Global Fund. Our overall objective was to assess which of the interventions and activities being proposed by countries in the area of sexual and reproductive health would enable them to attain internationally agreed goals and targets for universal access to care for HIV and sexual and reproductive health. As the Global Fund model is country-driven, the knowledge base acquired through this analysis will provide a clearer understanding of the extent to which countries are prioritizing sexual and reproductive health initiatives to tackle their HIV epidemics. We also reviewed selected grant agreements to assess whether sexual and reproductive health is still featured among the main programme activities. Finally, we analysed the sexual and reproductive health indicators appearing in proposals and grant agreements to find out how countries monitor and evaluate such activities and whether the Global Fund evaluates their results for performance-based funding.

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(Submitted: 15 December 2008 – Revised version received: 11 July 2009 – Accepted: 26 August 2009)

Methods

The process of submitting yearly proposals to the Global Fund began in 2002 (round 1), and rounds 2 to 9 have followed since. During such rounds, countries are invited to submit proposals to combat HIV/AIDS, tuberculosis and malaria. All proposals are evaluated by the Technical Review Panel, an independent body that recommends a selected few to the Board of the Global Fund, which then approves or rejects them.[3] Once a proposal is approved, the grant process begins. This process is divided into two phases: phase 1 is the initial two-year period for which a grant agreement is signed with the principal recipient(s) in a particular country (usually the minister of health or finance), who will manage the implementation of the activities under the grant; phase 2 comprises from the third year to the end of the approved proposal and could last an additional one to three years. Towards the end of phase 1 a comprehensive review of programme performance is conducted and the Global Fund decides whether to fund or not fund the remaining proposal term (phase 2). To implement performance-based funding and to facilitate grant management throughout the life of a grant, the Global Fund tracks programme performance against targets by using a set of indicators. These indicators are selected based on the activities proposed by countries and are listed in the performance framework that is part of the formal and legally binding grant agreement.[4]

The Global Fund's performance-based approach to providing grants is designed to ensure the efficient use of funds. Progress towards the objectives of a given programme and the use of grant funds are monitored by independent organizations contracted by the Global Fund to ensure that its funding is proving effective in the fight against the three diseases being targeted. A grant agreement[5] negotiated between the Global Fund and the principal recipient establishes the terms and conditions under which the Global Fund may provide funding to the principal recipient to implement the activities described in the proposals. The principal recipient implements the programme as described in the programme implementation description included as Annex A of the agreement. The attachment to Annex A, also called the performance framework, sets forth the main objectives of the programme and its key indicators, intended results and targets.

For this analysis, the content of each HIV-related proposal and selected grant agreement was screened for the inclusion of sexual and reproductive health in accordance with the elements described in the *WHO global reproductive health strategy to accelerate progress towards the attainment of international development goals and targets*.[6] This strategy includes five priority aspects: antenatal, intra-partum, postpartum and neonatal care; family planning, including infertility services; elimination of unsafe abortion; control of STIs, including HIV infection, reproductive tract infections, cervical cancer and other gynaecological conditions; and promotion of sexual health. Other cross-cutting elements listed in this strategy that were also considered for analysis included adolescents' exposure to risk, access to sexual and reproductive health services, prevention of mother-to-child transmission (PMTCT) of HIV, gender-based violence, male involvement in sexual and reproductive health and the promotion of human rights.

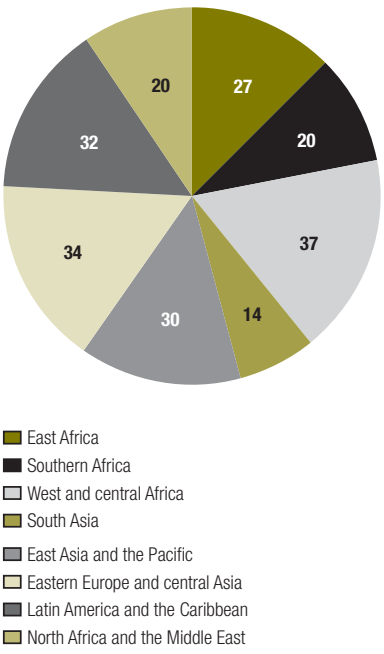
We analysed a total of 214 original HIV-related proposals from rounds 1 to 7 submitted by 134 countries and approved for funding. Fig. 1 shows the distribution of the proposals that were approved, by Global Fund region. When more than one proposal from the same country was submitted in one round, all were integrated into a single analysis for the country. This resulted in a total of 210 analyses.

Our analyses focused on proposed programmes and activities, specifically on each proposal's executive summary, goals, objectives, service delivery areas, activities and indicators. They did not include the background information provided in the proposals, such as the description of the national situation or of other strategies, initiatives and programmes targeting sexual and reproductive health.

We also selected a sample of 35 grant agreements. Nearly half (18) of them pertained to the three most highly-funded HIV-related portfolios for the African and Asian regions (the latter included eastern Europe and central Asia); the others (17) were picked at random. In this context, an HIV-related portfolio includes all HIV-related proposals submitted by a particular country in different rounds of funding. For example, the HIV-related portfolio for Ethiopia consists of three proposals (submitted in rounds 2, 4 and 7), worth almost US$ 950 million, for which three grant agreements were signed. The 18 grant agreements selected according to the described criteria were signed with Ethiopia, India, Malawi, the Russian Federation, Uganda and the Ukraine. The remaining 17 grant agreements were signed with Bangladesh, Cambodia, Cuba, Haiti, Kazakhstan, Nepal, Niger, Peru and the Sudan. When there was more than one grant agreement for the same country proposal in one round – this being the case when multiple principal recipients existed – a single analysis was conducted for all the grant agreements. Similarly, when a grant agreement for phase 1 and an amended and restated grant agreement for phase 2 existed, a single analysis was carried out for both.

The analysis of the grant agreements focused on the programme descriptions (Annex A) and on performance framework indicators (in the attachment to Annex A). The proposals and grant agreements were accessed on the Global Fund's web site.[7]

Fig. 1. **Regional distribution of HIV-related proposals approved by the Global Fund in rounds 1 to 7**



Global Fund, Global Fund to Fight AIDS, Tuberculosis and Malaria.

Due to time restrictions, we did not analyse unfunded proposals, which may provide further insight into proposed sexual and reproductive health activities. We were also unable to analyse the percentage of the total proposal budget allocated to these activities. This information is not readily available in HIV-related proposals or grant agreements on the Global Fund's web site.

Results

At least one element related to sexual and reproductive health was included in 99% of the HIV proposals and 88% of the selected grant agreements. Within the proposals and grant agreements, different wording was used to refer to the five priority aspects and related elements of sexual and reproductive health featured in the *WHO global reproductive health strategy to accelerate progress towards the attainment of international development goals and targets*. For example, antenatal, intra-partum, postpartum and neonatal care were not always referred to using these terms but were found under descriptions of PMTCT programmes and activities. Nevertheless, we tried to categorize such information in an objective and consistent way.

The proportion of funded HIV-related proposals that included elements of sexual and reproductive health was remarkably consistent across all rounds (Fig. 2). Table 1 shows the number and percentage of funded HIV-related proposals that included broader and more specific sexual and reproductive health elements. At least 70% of the HIV-related proposals included one or more of the four broad elements of sexual and reproductive health: information, education and communication; condom promotion/distribution; diagnosis and treatment of STIs, and PMTCT. A lower percentage included the more specific elements of sexual and reproductive health within these broader categories. Of the HIV-related proposals, 20–30% included elements such as sexual health counselling, gender-based violence, and linking of voluntary HIV counselling and testing with sexual and reproductive health services; fewer than 20% of them focused on adolescent sexual and reproductive health, the rights and needs of people living with HIV in terms of sexual and reproductive health, and safe abortion services. Overall, most elements of sexual and reproductive health were contained in fewer than 40% of the HIV-related proposals.

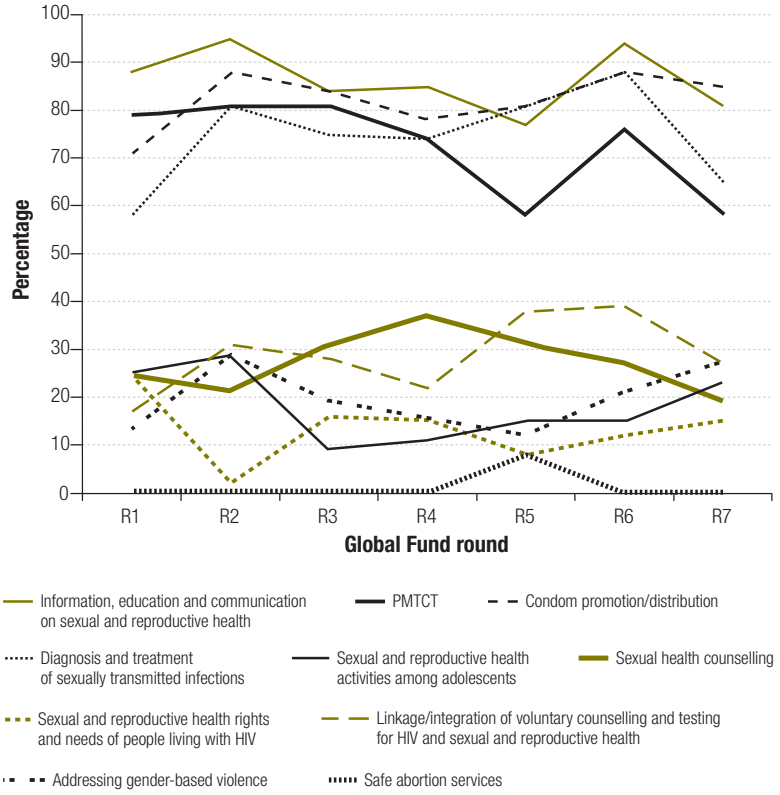
Table 1 also compares the integration of elements of sexual and reproductive health in the selected HIV-related proposals that were funded and in the grant agreements signed for these proposals (n = 35). More elements of sexual and reproductive health were present in the HIV-related proposals than in the grant agreements. For example, the diagnosis and treatment of STIs were mentioned in 69% of the HIV-related proposals but in only 54% of the grant agreements.

In addition, many elements of sexual and reproductive health that were present in the HIV-related proposals were not included at all in the selected grant agreements. This was true, for example, for the promotion of male involvement in sexual and reproductive health, condom promotion/distribution for dual protection, and syphilis screening and/or treatment. Although we analysed a limited number of grant agreements, a consistent trend was noted.

Family planning, a key component of sexual and reproductive health, was poorly represented, although it was mentioned under different sections, such as information, education and communication on PMTCT and/or family planning, condom promotion/distribution for dual protection, and family planning consultations within PMTCT. Family planning consultations were described in only 11% of HIV-related proposals and in 6% of grant agreements.

A possible reason for the discrepancies observed between HIV-related proposals and grant agreements in terms of the inclusion of elements of sexual and reproductive health may be that grant agreements provide information that is disease-specific, concise and not detailed. Further study at the country level may help clarify some of these issues and reveal how countries prioritize their interventions after a proposal is approved. One might, for instance, interview principal recipients or members of the Country Coordinating Mechanism (CCM) who are responsible for proposal development and oversight.

Fig. 2. **Percentage of HIV-related proposals approved by the Global Fund containing elements of sexual and reproductive health, by Global Fund round**



Global Fund, Global Fund to Fight AIDS, Tuberculosis and Malaria.

Table 1. **Sexual and reproductive health elements featured within 214 HIV proposals approved by the Global Fund, 35 proposals selected from among them, and the 35 corresponding grant agreements, rounds 1 to 7**

Broad sexual and reproductive health element [a]	Delivery of the service or referral to the service											
	Proposals (n = 210)				Proposals (n = 35)				Grant agreements (n = 35)			
	No.	%			No.	%			No.	%		
		> 70	40–69	< 40		> 70	40–69	< 40		> 70	40–69	< 40
Information, education and communication on sexual and reproductive health	183	87	–	–	29	83	–	–	21	–	60	–
Information, education and communication on PMTCT and/or family planning	94	–	45	–	19	–	54	–	7	–	–	20
Information, education and communication on STIs	136	–	65	–	20	–	57	–	13	–	–	37
Safe sex/sexual health promotion	111	–	53	–	21	–	60	–	9	–	–	26
Promotion of involvement of men in reproductive health [b]	13	–	–	6	–	–	–	–	–	–	–	–
Condom promotion/distribution	171	81	–	–	27	77	–	–	25	71	–	–
Female condoms	49	–	–	23	5	–	–	14	1	–	–	3
Prevention of STIs	56	–	–	27	7	–	–	20	1	–	–	3
Dual protection	24	–	–	11	3	–	–	9	–	–	–	–
Lubricants	42	–	–	20	9	–	–	26	2	–	–	6
Diagnosis and treatment of STIs	159	76	–	–	24	–	69	–	19	–	54	–
Syphilis screening and/or treatment [c]	46	–	–	22	5	–	–	14	–	–	–	–
Syndromic approach/management	84	–	40	–	12	–	–	34	6	–	–	17
Partner(s) follow-up	19	–	–	9	1	–	–	3	–	–	–	–
Equipment, supplies and drug procurement	93	–	44	–	16	–	46	–	3	–	–	9
PMTCT of HIV	154	73	–	–	27	77	–	–	20	–	57	–
Syphilis screening and/or treatment	19	–	–	9	5	–	–	14	–	–	–	–
Voluntary counselling and testing for HIV in antenatal care	106	–	50	–	18	–	51	–	4	–	–	11
Antiretroviral prophylaxis and/or treatment for mother and/or newborn	127	–	60	–	23	–	66	–	11	–	–	31
Pediatric early HIV diagnosis	32	–	–	15	4	–	–	11	1	–	–	3
Nutritional support for pregnant HIV positive women	18	–	–	9	3	–	–	9	–	–	–	–
Infant and young child feeding counselling and support	71	–	–	34	9	–	–	26	2	–	–	6
Family planning consultations	25	–	–	12	4	–	–	11	2	–	–	6
Follow-up of mother and child	39	–	–	19	8	–	–	23	1	–	–	3
Procurement of adequate equipment and supplies [d]	58	–	–	28	8	–	–	23	–	–	–	–
Family approach: involvement of men/partner and/or children	59	–	–	28	14	–	40	–	5	–	–	14
Self-help/support groups for mothers	17	–	–	8	2	–	–	6	–	–	–	–
Sexual health counselling	57	–	–	27	10	–	–	29	–	–	–	–
Negotiating safer sex/condom use	44	–	–	21	6	–	–	17	–	–	–	–
Couple counselling on safe sex/ sexual health	3	–	–	1	–	–	–	–	–	–	–	–

(Table 1, cont.)

Broad sexual and reproductive health element [a]	Delivery of the service or referral to the service											
	Proposals (*n* = 210)				Proposals (*n* = 35)				Grant agreements (*n* = 35)			
	No.	%			No.	%			No.	%		
		> 70	40–69	< 40		> 70	40–69	< 40		> 70	40–69	< 40
Addressing gender-based violence	42	–	–	20	4	–	–	11	–	–	–	–
Post-exposure prophylaxis for sexual violence victims	20	–	–	10	–	–	–	–	–	–	–	–
Emergency contraception	2	–	–	1	–	–	–	–	–	–	–	–
Linkage/integration of voluntary counselling and testing for HIV and sexual and reproductive health [e]	62	–	–	30	8	–	–	23	2	–	–	6
Specific sexual and reproductive health activities for adolescents[f]	39	–	–	19	7	–	–	20	2	–	–	6
Sexual and reproductive health rights and needs of people living with HIV [g]	26	–	–	12	4	–	–	11	–	–	–	–
Safe abortion services	2	–	–	1	–	–	–	–	–	–	–	–

Global Fund, Global Fund to Fight AIDS, Tuberculosis and Malaria; PMTCT, prevention of mother-to-child transmission; STI, sexually transmitted infection.

[a] For the first six broad elements, the data represent the percentage of HIV-related proposals or grant agreements that include that element and/or at least one of the specific sexual and reproductive health elements. The last four elements were already specific and were not further disaggregated.

[b] Besides within PMTCT, because that is already covered by "PMTCT: family approach (involvement of men/partner and/or other children)".

[c] Besides within PMTCT, because that is already covered by "PMTCT: syphilis screening and/or treatment".

[d] Besides anti-retroviral drugs.

[e] Besides within PMTCT or antenatal care, because that is already covered by "PMTCT: voluntary counselling and testing for HIV in antenatal care".

[f] Besides information, education and communication on sexual and reproductive health for adolescents, because that is already covered by "Information, education and communication on sexual and reproductive health". Also besides condom promotion/distribution for adolescents, because that is already covered by "Condom promotion/distribution".

[g] Besides PMTCT and condom promotion/distribution for people living with HIV, because that is already covered by "PMTCT" and "Condom promotion/distribution".

A preliminary analysis showed that sexual and reproductive health indicators were present in most of the HIV-related proposals and in 83% of the grant agreements reviewed. HIV-related proposals included indicators related to all of the broader elements of sexual and reproductive health mentioned in Table 1. However, many indicators were either too broad or too narrow. For example, the one pertaining to the number of young people reached with HIV/AIDS education in school settings does not specify whether HIV/AIDS education deals with safe sex, the prevention of unintended pregnancy, the prevention of STIs or condom promotion. Conversely, indicators for PMTCT were too narrow. They included, for example, an indicator related to prong 3 of the global PMTCT strategy,[8] namely a complete course of antiretroviral drugs given prophylactically to HIV-positive pregnant women. However, there was no indicator related to prong 2 of the PMTCT strategy, which is to prevent unintended pregnancy in HIV-positive women. To systematically measure and evaluate a comprehensive PMTCT programme at the country level, indicators for all elements of the PMTCT programme are needed. This example illustrates the more general problems involved in monitoring and evaluating HIV control programmes. Although countries may include PMTCT as a key activity in HIV-related proposals, in essence they will only be reporting on a few aspects of the broader PMTCT strategy.

Discussion

This is the first comprehensive and systematic analysis of the sexual and reproductive health elements included in HIV-related proposals supported by the Global Fund. The Programme of Action of the1994 International Conference on Population and Development[9] defined the prevention, diagnosis and treatment of HIV infection and AIDS as a core element of sexual and reproductive health services. In 2004, the 57th World Health Assembly adopted a comprehensive Global Reproductive Health Strategy[10] that is firmly based on the Programme of Action from the International Conference on Population and Development. It called for rapid progress in improving sexual and reproductive health, including the control of HIV infection. Although fragmentation in funding for sexual and reproductive health and HIV control programmes has unfortunately occurred, this study clearly demonstrates that CCMs and national level stakeholders see the opportunity for funding programmes in sexual and reproductive health as a means to combat HIV in their respective national settings. The inclusion of sexual and reproductive health elements within HIV proposals provides opportunities to reduce unsafe sexual behaviour; promote dual protection for the prevention of STIs and unintended pregnancies; reduce STIs, including HIV; reduce maternal and neonatal mortality and morbidity; help people find out their HIV status, and ensure respect for the sexual and reproductive health and rights of people living with HIV.

In this study, 99% of HIV-related proposals and 88% of the selected grant agreements reviewed included at least one element related to sexual and reproductive health. Most of the HIV-related proposals and more than 80% of the grant agreements also include indicators related to sexual and reproductive health. At least 70% of the HIV-related proposals included one or more of the four broad elements of sexual and reproductive health: information, education and communication on sexual and reproductive health; condom promotion and/or distribution; diagnosis and treatment of STIs, and PMTCT.

Despite the above, certain important aspects of each of these elements were found to be missing or were underrepresented in HIV-related proposals and grant agreements. For instance, within PMTCT, family planning, which is one of the four pillars of the global PMTCT strategy, was poorly represented. So were many of the other elements, such as preventing unintended pregnancy and STIs through the promotion of dual protection, preventing unsafe abortion, and preventing and managing gender-based violence. These areas have very important implications for HIV control programmes; they must all be at the heart of HIV-related proposals to ensure the rights and needs of people living with HIV, meet their fertility needs, prevent forced pregnancy termination, or provide services for victims of violence. Moreover, the absence of indicators for measuring such activities in most proposals and grant agreements points to a great missed opportunity and to the risk that these activities will not be implemented or pursued.

One must not assume that when proposed HIV-related programmes rate low in sexual and reproductive health elements, programmes related to such elements do not exist at the country level. The Global Fund is one partner among many that work with countries; other agencies or initiatives could be addressing gaps in this area. Nonetheless, the Global Fund has a crucial, catalytic role to play by helping countries integrate sexual and reproductive health in their HIV control programmes and by collaborating with partners who can further support countries in their efforts to stem the HIV epidemic and reach universal access targets.

The Global Fund could develop new proposal guidelines and include in its proposal forms questions that will lead CCMs to consider sexual and reproductive health when developing disease control programmes. For example, direct reference to sexual and reproductive health could be made in the questions on programme goals, objectives, service delivery areas, activities, cross-cutting interventions for health systems strengthening, and monitoring and evaluation. The Global Fund already encourages CCMs to conduct their own analyses on sexual and reproductive health. The generic guide for the rapid assessment of sexual and reproductive health and HIV linkages is listed on the Global Fund's web site.[11] In addition, the Global Fund should consider including more indicators on sexual and reproductive health in its monitoring and evaluation toolkit and make it clear that such indicators are acceptable within the performance-based funding framework.

Initiatives such as the Advocacy Summit on Global Fund round 7: Integration of Sexual and Reproductive Health (Geneva, Switzerland, December 2006)[12] and the Mobilizing for RH/HIV Integration Initiative[13] have provided countries with important support in preparing HIV-related proposals for the Global Fund that integrate sexual and reproductive health, as well as in advocacy efforts to get stakeholders at the national and global levels to prioritize sexual and reproductive health and HIV integration as a critical component of scaling up access to HIV/AIDS prevention, treatment and care.

Our analysis can boost advocacy efforts and further help countries in strengthening interventions for sexual and reproductive health within programmes that address HIV/AIDS prevention and care. It is critically important to focus on the sexual and reproductive health needs of those living with HIV or at risk of acquiring HIV infection and to invest resources and energy where they are most needed: not on the virus, but on human beings. ■

Competing interests: None declared.

Résumé

Place de la santé sexuelle et génésique dans les propositions liées au VIH approuvées par le Fonds mondial de lutte contre le sida, la tuberculose et le paludisme

Objectif Évaluer les interventions relevant de la santé sexuelle et génésique (SSG) mentionnées par les pays dans les propositions liées au VIH approuvées par le Fonds mondial de lutte contre le sida, la tuberculose et le paludisme (Fonds mondial).

Méthodes A partir de la base de données du Fonds mondial, nous avons recherché des éléments et des indicateurs concernant la SSG dans toutes les propositions liées au VIH approuvées par le Fonds (214) et soumises par 134 pays dans le cadre des séries 1 à 7 de propositions, ainsi que dans un échantillon représentatif de 35 accords de subvention.

Résultats Au moins 70 % des propositions liées au VIH contenaient un ou plusieurs des quatre types généraux d'éléments : information, formation et communication concernant la SSG suivants ; promotion de l'utilisation ou de la distribution de préservatifs ; diagnostic et traitement des infections sexuellement transmissibles ; et prévention de la transmission du VIH de la mère à l'enfant. Entre 20 et 30 % des propositions contenaient des conseils sur la santé sexuelle, des informations sur la violence liée à l'appartenance sexuelle et des éléments reliant les activités de conseil et dépistage volontaire du VIH et les services de SSG. Moins de 20 % des propositions s'intéressaient à la SSG des adolescents, aux droits et aux besoins des personnes vivant avec le VIH ou aux services d'interruption de grossesse. Tous ces éléments apparaissaient rarement, voire jamais, dans les accords de subvention examinés. Globalement néanmoins, les indicateurs de SSG étaient mentionnés dans la plupart des propositions liées au VIH et dans plus de 80 % des accords de subvention.

Conclusion Les mécanismes de coordination à l'échelle des pays et les acteurs nationaux voient dans le financement de la SSG un moyen de faire face au problème des infections à VIH dans leurs contextes nationaux respectifs. Cependant, nous attirons l'attention sur quelques opportunités manquées de lier la lutte contre le VIH et les services de SSG.

Resumen

La salud sexual y reproductiva en las propuestas relacionadas con el VIH apoyadas por el Fondo Mundial de Lucha contra el SIDA, la Tuberculosis y la Malaria

Objetivo Evaluar las intervenciones en materia de salud sexual y reproductiva incluidas por los países en las propuestas relacionadas con el VIH aprobadas por el Fondo Mundial de Lucha contra el SIDA, la Tuberculosis y la Malaria (Fondo Mundial).

Métodos Examinamos la base de datos del Fondo Mundial para encontrar elementos e indicadores de la salud sexual y reproductiva en todas las propuestas aprobadas relacionadas con el VIH (214) presentadas por 134 países en las rondas 1 a 7 y en una muestra representativa de 35 acuerdos de concesión de subvenciones.

Resultados Al menos el 70% de las propuestas relacionadas con el VIH incluían uno o más de los cuatro elementos generales: información, educación y comunicación sobre salud sexual y reproductiva; promoción y distribución de preservativos; diagnóstico y tratamiento de las infecciones de transmisión sexual; y prevención de la transmisión del VIH de la madre al niño. Un 20%–30% incluían asesoramiento sobre salud sexual, el tema de la violencia de género y la vinculación del asesoramiento y pruebas voluntarias del VIH con los servicios de salud sexual y reproductiva. Menos del 20% se centraban en la salud sexual y reproductiva de los adolescentes, los derechos y necesidades de las personas afectadas por el VIH o los servicios de aborto sin riesgos. Todos esos elementos rara vez, si no nunca, figuraban en los acuerdos de subvención examinados. Globalmente, sin embargo, sí aparecían indicadores de salud sexual y reproductiva en la mayoría de las propuestas relacionadas con el VIH y en más del 80% de los acuerdos de concesión de subvenciones.

Conclusión Los mecanismos coordinadores en los países y los interesados directos a nivel nacional ven en la financiación de la salud sexual y reproductiva una manera de abordar el problema de la infección por VIH en sus respectivos entornos nacionales. Sin embargo, según hemos destacado, se están desaprovechando algunas oportunidades para vincular los servicios de VIH y los de salud sexual y reproductiva.

ملخص

الصحة الجنسية والإنجابية في المقترحات المتعلقة بالإيدز المدعومة من الصندوق العالمي لمكافحة الإيدز والسل والملاريا

الهدف: تقييم تدخلات الصحة الجنسية والإنجابية المتضمنة في مقترحات البلدان التي حازت على موافقة الصندوق العالمي لمكافحة الإيدز والسل والملاريا.

الطريقة: فحص الباحثون قاعدة معطيات الصندوق العالمي لمكافحة الإيدز والسل والملاريا بحثاً عن عناصر ومؤشرات خاصة بالصحة الجنسية والإنجابية في جميع مقترحات البحوث المتعلقة بالإيدز والحائزة على الموافقة وعددها 214 مقترحاً مقدَّماً من 134 دولة، من الجولة الأولى وحتى الجولة السابعة، إلى جانب عينة توضيحية لـ 35 من اتفاقات المنح.

الموجودات: تضمن ما لا يقل عن 70% من المقترحات المتعلقة بالإيدز أربعة عناصر رئيسية وهي المعلومات حول الصحة الجنسية والإنجابية، والتثقيف والتواصل، والترويج للعازل الذكري وتوزيعه، وتشخيص ومعالجة العدوى المنقولة جنسياً، والوقاية من انتقال فيروس الإيدز من الأمهات إلى أطفالهن. فيما تضمن 20-30% من هذه الاقتراحات المشورة حول الصحة الجنسية، والعنف المرتكز على الجندر، والربط بين المشورة الطوعية والاختبار الطوعي لفيروس الإيدز مع خدمات الصحة الجنسية والإنجابية. كما ركز أقل من 20% من المقترحات على الصحة الجنسية والإنجابية للمراهقين، أو احتياجات وحقوق المتعايشين مع الإيدز، أو خدمات الإجهاض الآمن. وقد كان من النادر إبراز جميع هذه العناصر، في اتفاقات المنح التي تمت مراجعتها. وعلى وجه الإجمال، فإن مؤشرات الصحة الجنسية والإنجابية ظهرت في معظم المقترحات المتعلقة بالصحة الجنسية والإنجابية وفي أكثر من 80% من اتفاقات المنح.

الاستنتاج: يرى المعنيون على المستوى الوطني وآليات التنسيق القطرية في تمويل الصحة الجنسية والإنجابية وسيلة للتصدِّي لمشكلة العدوى بفيروس الإيدز في المواقع الوطنية الخاصة بهم. ومع ذلك فقد ركز الباحثون على بعض الفرص الضائعة للربط بين الإيدز وخدمات الصحة الجنسية والإنجابية.

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Assessing the incremental effects of combining economic and health interventions: the IMAGE study in South Africa

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Objective To explore whether adding a gender and HIV training programme to microfinance initiatives can lead to health and social benefits beyond those achieved by microfinance alone.

Methods Cross-sectional data were derived from three randomly selected matched clusters in rural South Africa: (i) four villages with 2-year exposure to the Intervention with Microfinance for AIDS and Gender Equity (IMAGE), a combined microfinance–health training intervention; (ii) four villages with 2-year exposure to microfinance services alone; and (iii) four control villages not targeted by any intervention. Adjusted risk ratios (aRRs) employing village-level summaries compared associations between groups in relation to indicators of economic well-being, empowerment, intimate partner violence (IPV) and HIV risk behaviour. The magnitude and consistency of aRRs allowed for an estimate of incremental effects.

Findings A total of 1409 participants were enrolled, all female, with a median age of 45. After 2 years, both the microfinance-only group and the IMAGE group showed economic improvements relative to the control group. However, only the IMAGE group demonstrated consistent associations across all domains with regard to women's empowerment, intimate partner violence and HIV risk behaviour.

Conclusion The addition of a training component to group-based microfinance programmes may be critical for achieving broader health benefits. Donor agencies should encourage intersectoral partnerships that can foster synergy and broaden the health and social effects of economic interventions such as microfinance.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

The United Nations Millennium Development Goals have articulated a global agenda that explicitly recognizes the importance of addressing the intersections between poverty, gender inequalities and health.[1] Microfinance programmes expand access to credit and savings services. Globally they reach over 100 million poor clients, most of them women.[2] In addition to the economic benefits of microfinance, there is some evidence to suggest that it may be an effective vehicle for empowering women. Acquiring new business skills may enhance their self-esteem, self-confidence, conflict-resolution ability and household decision-making power and expand their social networks.[3–5] Reductions in child mortality and improvements in nutrition, immunization coverage and contraceptive use have also been demonstrated,[3,6–8] which has sparked interest in the potential of microfinance to bring about improvements in connection with other health-related issues, such as HIV/AIDS and gender-based violence.[9–12]

Both HIV/AIDS and intimate partner violence (IPV) are major public health challenges in sub-Saharan Africa. In South Africa alone, 29.1% of women visiting public antenatal clinics in 2006 were HIV-positive,[13] and national prevalence surveys suggest that women and girls make up 55% of the HIV-infected population.[14] In addition, 1 in 4 South African women reports having experienced IPV,[15] which has been identified as an independent risk factor for HIV infection.[16]

We conducted the Intervention with Microfinance for AIDS and Gender Equity (IMAGE) study, a cluster randomized trial, to evaluate the effect of a combined microfinance and training intervention on poverty, gender inequalities, IPV and HIV/AIDS. Carried out in rural South Africa, IMAGE combined group-based microfinance with a 12-month gender and HIV training curriculum. Women received the training at loan meetings held every two weeks. After 2 years, IMAGE participants showed improvements in economic well-being and multiple dimensions of empowerment.[17] Furthermore, levels of physical and sexual IPV were 55% lower among IMAGE participants compared with controls,[18] and young programme participants reported higher levels of HIV-related communication and HIV testing and greater condom use with non-spousal partners.[19]

These findings highlight the potential synergy that can be generated by integrating targeted public health interventions into development initiatives such as microfinance.

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(*Submitted: 9 Jul 2008 – Revised version received: 6 March 2009 – Accepted: 19 March 2009 – Published online: 8 September 2009*)

By addressing the immediate economic priorities of participants, IMAGE was able to gain access to a particularly vulnerable target group and to maintain sustained contact for over 1 year – a critical opportunity rarely afforded to stand-alone health interventions.

Because the IMAGE study tested a combined microfinance–training model, the findings raise additional policy- and programme-related questions. For example, how much of the observed effect is attributable to the microfinance component of the intervention and how much to the training programme? In a donor climate where microfinance institutions are under growing pressure to recover their operational costs and achieve financial sustainability, what added value does health training contribute? Is it possible that the provision of microfinance services alone would produce a similar range of economic, social and health benefits?

To address these questions, we analysed data from villages participating in IMAGE, matched villages receiving microfinance alone and a control group. Our analysis compared indicators of economic well-being, empowerment, IPV and HIV-risk behaviour in these three groups after similar duration of exposure.

Methods

The study was conducted between June 2001 and March 2005 in rural Limpopo province, an area where, despite South Africa's status as a middle-income country, poverty remains widespread and more than 60% of adults are unemployed.[20,21]

Study design

Data on IMAGE participants and controls were derived from a cluster randomized trial and are presented in detail elsewhere.[18] Briefly, the socioeconomic characteristics of villages in the study site were assessed through field reconnaissance surveys and interviews with village leaders and community members. Eight villages were then pair-matched according to size and accessibility, and one village from each pair was randomly allocated to receive the intervention at study onset; the other received the intervention on study completion. In both sets of villages, eligible intervention participants were recruited on the basis of participatory wealth ranking criteria, which were used to identify women aged 18 years and over from the poorest households in each village.[22] Women from control villages were matched by age and poverty status and were recruited contemporaneously. Surveys were conducted in October 2004 and were scheduled such that all participants were evaluated at a uniform point in time: 24 months following the introduction of IMAGE.[18]

Surveys were conducted by a team of female researchers who had received 4 weeks of intensive training that included technical, ethical and safety considerations in conducting research on HIV and IPV.[23] The construction of outcome indicators has been described in detail elsewhere.[17,18] Indicators measuring economic well-being and empowerment were drawn from the development and microfinance literature, piloted and then adapted to the local South African context. Quantitative indicators of empowerment included measures of self-confidence, financial confidence, challenging of gender norms, relationship with partner, autonomy in decision-making, perceived contribution to the household and social group membership. Measures of IPV assessed participants' attitudes towards and experiences of physical and sexual violence by an intimate partner, and were drawn from the WHO Violence Against Women Instrument.[24] In each interview women were asked directly about their experience of different acts of physical or sexual violence by male partners, ever and in the past year. They were also asked about their experience of controlling behaviour by an intimate partner in the past year and about their attitudes towards the acceptability of IPV in different circumstances. HIV-related indicators captured information about sexual behaviour, household communication and collective action against HIV/AIDS.

To identify a comparable group of villages receiving microfinance alone (MF-only), a stratified random sample was generated from villages where microfinance projects were being implemented without the training component. As before, individual participants were recruited on the basis of participatory wealth ranking. Villages were eligible for inclusion in the sampling frame if they met three criteria: (i) no prior exposure to microfinance; (ii) 2-year exposure to MF-only; (iii) a socioeconomic and cultural context similar to that of the IMAGE and control villages (assessed through field reconnaissance surveys and interviews with community members). Eleven villages meeting those criteria were identified and were grouped according to size and accessibility. Villages were then randomly selected to generate four villages matching the characteristics of the IMAGE and control groups.

A survey of MF-only participants was undertaken in these villages in February 2006, 24 months following the introduction of the MF-only intervention. A list of all women who had received a loan during the previous 2 years was generated. Data were collected from all individuals who had joined the programme, regardless of whether they were still participating 2 years later. Data were thus collected on both current participants and drop-outs. Outcome data were collected in face-to-face interviews by members of the same research team with survey tools from the original trial.

Microfinance-only intervention

The microfinance component was implemented by the Small Enterprise Foundation, a South African nongovernmental organization (NGO) with over 60 000 active clients. The Grameen Bank model[25] was applied, with groups of five women serving as guarantors for one another's loans and all five having to repay before any member of the group was eligible for more credit. Loans were used to support a range of small businesses (e.g. selling fruit and vegetables, second-hand clothes and other products). Loan centres consisting of approximately 40 women (eight groups of five women) met fortnightly to make loan payments, apply for additional credit and discuss business plans.

IMAGE

In addition to the microfinance component described above, IMAGE included a participatory learning programme called "Sisters for Life", which was integrated into the fortnightly loan centre meetings. The programme comprised two phases, delivered over 12–15

Table 1. **Village and individual characteristics of the IMAGE study population, Limpopo province, South Africa, 2001–2005**

Study population	Control	MF only	IMAGE
Villages			
No. enrolled	4	4	4
Households (no., range)	1647 (817–3334)	1489 (212–3099)	1129 (225–1918)
Average household size (mean no. of dwellers, range)	4.9 (4.5–5.0)	4.5 (4.3–4.9)	5.1 (5.0–5.1)
Female (%, range)	55 (54–56)	56 (55–60)	55 (54–57)
Aged under 15 years (%, range)	42 (40–44)	43 (40–44)	40 (39–44)
No income (%, range)	48 (36–56)	34 (25–47)	45 (42–48)
Unemployed (% of those of working age, range)	65 (60–79)	60 (52–80)	70 (68–73)
Completed primary education or higher (% of those of school age, range)	45 (40–55)	48 (41–52)	49 (39–52)
Individuals			
No. surveyed 2 years post-intervention	363	480	387
Age (median no., IQR)	44 (35–52)	49 (40–59)	43 (36–51)
Female-headed household (no., %)	232 (55)	225 (47)	206 (50)
Marital status			
Never married (no., %)	99 (27)	84 (18)	74 (19)
Currently married (no., %)	146 (40)	221 (46)	172 (45)
Divorced, separated, or widowed (no., %)	118 (33)	175 (36)	140 (36)
Microfinance indicators			
Loans taken (median no., IQR)	–	3 (2–4)	4 (3–4)
Largest loan (median no., IQR)	–	US$ 195 (150–240)[a]	US$ 150 (905–226)[b]

IMAGE, Intervention with Microfinance for AIDS and Gender Equity; IQR, interquartile range; MF, microfinance; R, South African rand.
[a] Equivalent to R1300 (1000–1600) as per exchange rate on 1 January 2004: R1 = US$ 0.15.
[b] Equivalent to R1000 (600–1500) as per exchange rate on 1 January 2004: R1 = US$ 0.15.
Data obtained from Statistics South Africa.[27]

months. Phase 1 (first 6 months) consisted of 10 training sessions of 1 hour and covered topics including gender roles, cultural beliefs, power relations, self-esteem, communication, domestic violence and HIV. Participatory methods were used with a view to increasing confidence, communication skills and critical thinking. Phase 2 encouraged wider community mobilization to engage youth and men in the intervention villages. Women deemed "natural leaders" by their peers were elected by loan centres to undertake a further week of training and subsequently worked with their centres to address priority issues, including HIV and IPV. The Sisters for Life programme was developed and piloted in conjunction with a South African NGO and was delivered alongside microfinance services by a separate team of trainers. Further details about the intervention have been published elsewhere.[26]

Control group

Women in the control group received neither IMAGE nor microfinance-only interventions during the study period; however, IMAGE was implemented in control villages at study conclusion.

Data analysis

Our analysis first compared baseline sociodemographic data from the 2001 South African census[27] for the three study groups. Analysis of outcome data involved three two-way comparisons: MF-only versus control, IMAGE versus control and IMAGE versus MF-only. Since the interventions were administered at the village level, cluster analysis was performed. For each comparison, crude measures of effect (prevalence or risk ratios, identified as RRs) with 95% confidence intervals (CIs) were calculated by entering the log of village-level summaries, weighted by village denominator, into an analysis of variance model that included terms for intervention and village triplet.

To control for possible baseline imbalances between women in intervention and control groups, we calculated adjusted measures of effect (aRRs) by means of a 2-stage process. First, using a logistic regression model fitted to individual-level data from control villages, we derived expected outcomes for each village on the basis of age, marital status, education, parity and sex of the household head for each respondent. We then entered standardized village-level summaries of the ratio of observed to expected outcomes into an analysis of variance model as described above. Stata version 9.0 (StataCorp, College Station, Texas, USA) was used to perform all statistical analyses. In addition to recording results for individual indicators, we assessed the consistency of patterns (direction and magnitude of effect) for all indicators within each of the four outcome domains: economic well-being, empowerment, IPV and HIV risk behaviour.

Informed consent was obtained from all participants. The study was approved by institutional review boards at the University of the Witwatersrand (South Africa) and the London School of Hygiene and Tropical Medicine (United Kingdom).

Results

Study enrolment and baseline characteristics

A total of 1409 participants were enrolled into the interventions or recruited as controls. Of these, 363 of 430 (84%) in the control group, 480 of 549 (87%) in the MF-only group and 387 of 430 (90%) in the IMAGE group

were successfully interviewed at 2 years post-intervention. In all groups the median age was similar (43–49 years) and married women outnumbered single, divorced, separated or widowed women (Table 1). At the village level, the three groups were broadly similar in terms of pre-intervention sociodemographic characteristics, including household size, age, sex, income, employment and education.

Comparative analysis

Table 2 shows the results of the analysis comparing intervention effects among the three study groups. These results are summarized graphically in Fig. 1.

Microfinance only versus control

Evaluation of the effects of the MF-only intervention against the control group revealed a clear pattern of improvement across all nine indicators of economic well-being, including household asset value, ability to repay debts and ability to meet basic household needs. For all economic variables, intervention effects were in the same direction, with aRRs ranging from 1.22 to 3.38 and CIs excluding 1 for most indicators. However, this same degree of consistency was not observed across the empowerment, IPV or HIV-related variables, where the direction of intervention effects varied among the indicators in each domain.

IMAGE versus control

Comparison of the effects of IMAGE against the control group showed a clear and consistent pattern of improvement in all 24 indicators across all domains. These included all indicators of economic well-being, empowerment (e.g. greater self-confidence, autonomy in decision-making, and larger social networks), IPV (including reduction in past-year experience of physical or sexual IPV) and HIV risk behaviour (including increased condom use at last sex with a non-spousal partner). For all these variables, aRRs indicated a positive intervention effect, with many attaining statistical significance.

Microfinance only versus IMAGE

When the effects of the MF-only intervention were compared with those of IMAGE, there was no clear pattern to suggest that one of the two types of intervention had produced greater improvements in economic well-being. However, IMAGE consistently showed greater effect on all variables relating to empowerment, IPV and HIV risk behaviour, and in many cases the change was statistically significant.

Discussion

This study set out to explore whether a complex intervention that combines a gender and HIV training programme with group-based microfinance can lead to health and social benefits beyond those achieved through microfinance alone. After 2 years, both the villages that received microfinance-only interventions and those that received the combined microfinance–training intervention (IMAGE) were found to have higher levels of economic well-being than matched control villages. However, only the combined intervention was associated with a wider range of effects in relation to women's empowerment, reduced risk of IPV and HIV protective behaviour. These findings lend support to the hypothesis that adding a health component to a conventional poverty reduction programme can create synergies that may be critical for achieving broader health and social benefits.

The study had several strengths, including efforts to ensure comparability between villages within the three study groups, age- and poverty-matching among participants and cluster-level analysis of outcomes. Outcome indicators were defined before analysis, and the analysis controlled for potential confounding factors. Despite the small number of villages and limited study power to detect cluster-level differences, statistically significant associations were evident for many indicators. What was, however, more striking was the consistent pattern of associations that emerged across all predefined health and social domains when the incremental effects of the combined intervention versus microfinance alone were examined.

We presented measures of effect and confidence intervals for all findings (Table 2), thereby allowing readers to judge the strength of the evidence for themselves. Many of these results were not "significant" in that they did not allow us to reject the null hypothesis of no effect at the 5% significance level. However, researchers recognize that, in addition to significance tests, the directionality, consistency and congruency of observed outcomes are important in evaluating complex interventions with multiple outcomes.[28] Taken together, we feel that the data we present in Table 2 and Fig. 1 help to paint a picture of the relative contribution of the intervention components and also illustrate the remarkable consistency of observed changes in predefined indicators and the congruency between pathway variables and health outcomes.

The study also had several limitations. The data employed in the analysis were essentially cross-sectional and were collected after 2 years of exposure to the interventions. Consequently, it is difficult to make definitive statements about causality. However, villages were randomly selected after careful matching, and national census data suggest that the three study groups had similar baseline characteristics. As participants self-selected to join the MF-only or IMAGE interventions, there may have been unmeasured differences between the intervention groups and the control group. However, it is unlikely that this selection bias would influence comparisons between the IMAGE and MF-only groups, since both types of intervention required a similar time commitment – a factor that minimizes a form of bias common to evaluations of microfinance programmes.[29] Finally, self-reported outcomes may be subject to bias, although the direction of such bias is difficult to predict. It has been noted that heightened sensitization to issues relating to gender-based violence can lead to increased reporting of IPV,[23] a bias that would tend to underestimate the added value of IMAGE over the MF-only intervention.

Why might additional inputs, such as the IMAGE training programme, be important for achieving wider health and social effects? Critics of microfinance have long questioned whether, in the absence of efforts to address broader gender inequalities, simply providing financial services to women can be truly empowering. They note that offering credit to women does not necessarily guarantee their control over its use, and that the pressure to pay back loans can add to the already heavy burden of responsibilities borne by poor women.[29–31] Moreover, while some studies have suggested that participation in microfinance can reduce the risk of IPV,[31–33] others have noted that attempting to empower women

Table 2. **Comparison of intervention effects on economic well-being, empowerment, IPV and HIV risk behaviour among women participating in IMAGE, women receiving microfinance only and a control group, Limpopo province, South Africa, 2001–2005**

Outcome	Control		MF		IMAGE		MF vs control				IMAGE vs control				IMAGE vs MF			
	No./*n*	%	No./*n*	%	No./*n*	%	RR	95% CI	aRR[a]	95% CI	RR	95% CI	aRR[a]	95% CI	RR	95% CI	aRR[a]	95% CI
Economic well-being																		
Greater food security	129/361	36	350/480	73	177/371	48	2.58	0.83–8.01	2.33	0.73–7.42	1.34	0.22–8.21	1.28	0.20–8.31	0.59	0.19–1.85	0.63	0.22–1.85
Estimated household asset value > US$ 300	182/361	50	313/480	65	207/370	56	1.29	1.20–1.38	1.22	1.15–1.30	1.10	0.79–1.54	1.08	0.81–1.45	0.84	0.57–1.25	0.88	0.64–1.20
Greater expenditure on home improvements	70/361	19	147/474	31	129/370	35	1.57	0.78–3.17	1.46	0.71–2.97	1.82	1.25–2.64	1.68	1.22–2.32	1.14	0.64–0.03	1.14	0.62–2.08
Better able to pay back debt	86/360	24	340/480	71	194/371	52	3.71	1.16–11.80	3.38	1.09–10.50	2.41	0.55–10.56	2.34	0.50–11.01	0.72	0.37–1.40	0.77	0.38–1.56
Membership in *stokvel* (savings group)	55/363	15	98/480	20	140/387	36	1.32	1.22–1.43	1.38	1.03–1.85	2.13	0.92–4.94	2.06	0.84–5.08	1.64	0.74–3.66	1.53	0.64–3.64
Able to meet basic needs in past year	39/316	12	167/434	38	94/350	27	3.65	1.77–7.49	3.17	1.69–5.94	1.86	0.26–13.10	1.71	0.21–14.25	0.58	0.11–3.10	0.63	0.12–3.40
Possesses bank account	111/360	31	210/474	44	147/371	40	1.42	1.02–1.98	1.29	0.99–1.68	1.25	0.91–1.71	1.21	0.87–1.66	0.87	0.56–1.36	0.94	0.72–1.24
Better perception of household economic well-being	186/361	52	347/474	73	277/371	75	1.43	0.87–2.42	1.40	0.86–2.28	1.48	0.80–2.75	1.43	0.75–2.71	1.03	0.78–1.36	1.03	0.75–1.42
Has not had to beg in past month	120/362	33	346/480	72	201/387	52	2.31	1.29–4.14	2.22	1.32–3.73	1.45	0.56–3.73	1.36	0.47–3.94	0.67	0.25–1.80	0.66	0.24–1.81
Empowerment																		
Individual level																		
Greater self-confidence	227/358	63	235/480	49	278/383	73	0.76	0.71–0.82	0.76	0.71–0.82	1.16	0.83–1.61	1.12	0.82–1.53	1.49	1.05–2.13	1.44	1.00–2.06
Greater financial confidence	140/360	39	219/480	46	278/386	72	1.50	0.32–7.07	1.48	0.33–6.55	2.26	0.43–1.91	2.13	0.42–10.82	1.51	0.84–2.68	1.44	0.77–2.69
Challenges gender norms	154/361	43	248/478	52	233/381	61	1.26	0.62–2.58	1.30	0.68–2.50	1.54	0.84–2.79	1.53	0.86–2.71	1.19	0.99–1.43	1.16	0.97–1.38
Household level																		
Supportive partner relationship[b]	151/248	61	189/338	56	212/290	73	0.93	0.65–1.31	0.85	0.61–1.19	1.21	0.81–1.80	1.18	0.84–1.67	1.28	1.02–1.62	1.37	1.09–1.72
Autonomy in decision-making[b]	55/149	37	84/220	38	105/184	57	1.21	0.39–3.75	1.35	0.42–4.30	1.70	0.72–4.01	1.67	0.92–3.03	1.41	0.66–3.02	1.27	0.62–2.59
Perceived contribution to household[b]	56/146	38	148/206	72	121/185	65	1.89	1.36–2.63	0.92	0.84–1.02	1.70	1.12–2.58	1.73	1.19–2.53	0.88	0.59–1.30	1.84	1.35–2.51
Community level																		
Larger social network	134/363	37	267/480	56	275/386	71	1.57	0.74–3.32	1.37	0.67–2.77	1.95	1.00–3.80	1.81	0.92–3.56	1.29	0.85–1.96	1.38	0.94–2.01
Greater sense of community support	184/362	51	204/480	43	232/387	60	0.86	0.54–1.33	0.82	0.50–1.33	1.14	0.39–3.36	1.10	0.38–3.17	1.33	0.57–3.13	1.33	0.59–3.01
Greater solidarity in a crisis	179/363	49	253/479	53	306/387	79	1.12	0.56–2.23	1.12	0.59–2.12	1.68	0.83–3.39	1.60	0.81–3.13	1.49	1.20–1.85	1.43	1.11–1.83
Intimate partner violence																		
Attitudes condoning IPV	233/361	65	326/472	69	182/382	48	1.07	0.84–1.37	1.05	0.81–1.36	0.73	0.44–0.23	0.73	0.42–1.27	0.66	0.48–0.90	0.67	0.50–0.90
Past year experience of controlling behaviour[b]	101/242	42	158/337	47	95/282	34	1.12	0.74–1.70	1.18	0.77–1.80	0.78	0.34–1.82	0.84	0.38–1.87	0.68	0.35–1.33	0.69	0.35–1.36
Past year experience of physical and/or sexual IPV[b]	30/248	12	39/337	12	17/290	6	0.79	0.22–2.93	0.86	0.22–3.36	0.50	0.28–0.89	0.51	0.28–0.93	0.63	0.11–3.61	0.59	0.09–3.66
HIV-related risk behaviour																		
Household communication about sex and HIV	197/361	55	308/480	64	331/383	86	1.15	0.76–1.72	1.17	0.76–1.80	1.60	1.25–2.05	1.57	1.20–2.05	1.37	0.98–1.93	1.32	0.90–1.93
Participation in HIV march or rally	124/361	34	151/480	31	290/383	76	0.92	0.57–1.49	0.91	0.58–1.41	2.21	1.03–4.76	2.14	1.00–4.54	2.37	1.32–4.25	2.32	1.33–4.03
Condom use at last sex with all non-spousal partners[c]	10/45	22	17/52	33	23/51	45	1.74	0.37–8.21	1.17	0.32–4.29	2.41	0.77–7.54	1.83	0.94–3.57	1.41	0.97–2.04	1.41	0.97–2.04

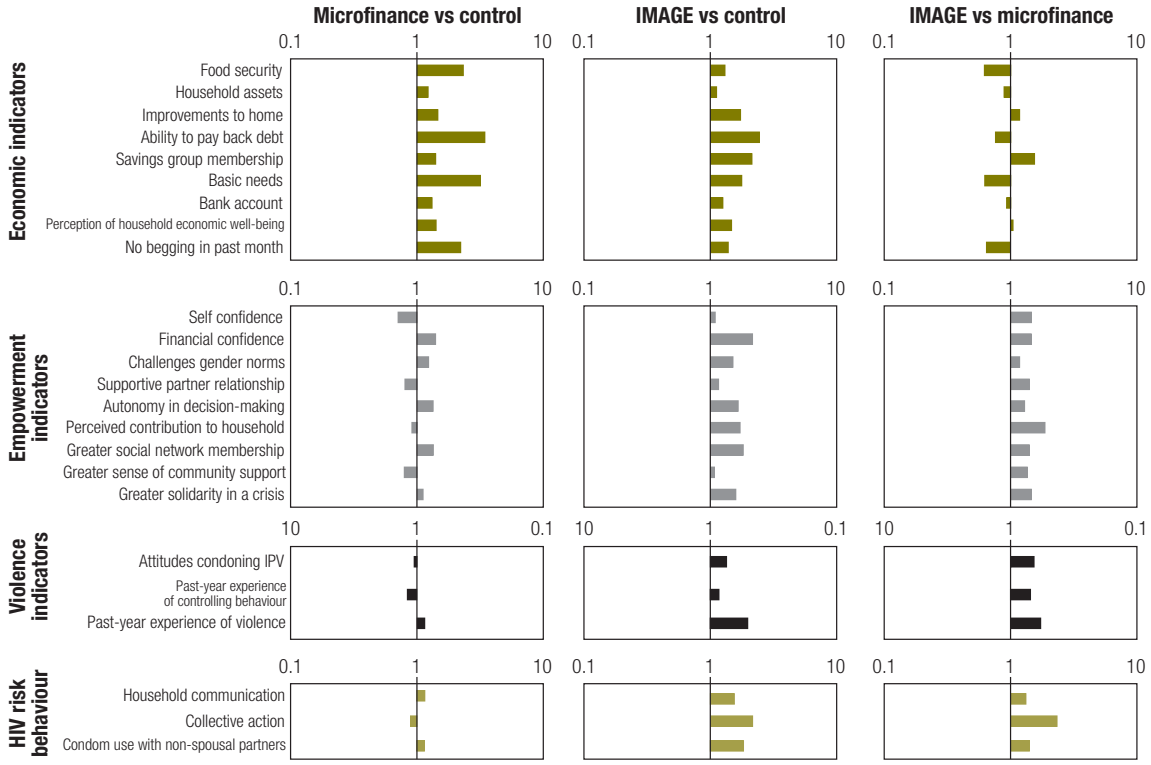
aRR, adjusted risk ratio; IMAGE, Intervention with Microfinance for AIDS and Gender Equity; IPV, intimate partner violence; MF, microfinance; RR, risk ratio.

[a] aRRs adjusted for village triplet, age group, marital status, education, parity and sex of household head.

[b] Among currently partnered women (aRRs do not control for marital status).

[c] Among women aged < 35 years old reporting at least one non-spousal partner.

Fig. 1. **Consistency of intervention effects among IMAGE study groups,[a] Limpopo province, South Africa, 2001-2005**



IMAGE, Intervention with Microfinance for AIDS and Gender Equity; IPV, intimate partner violence.
[a] All adjusted risk ratios for indicators represented as bar graphs on a logarithmic scale.

may exacerbate this risk by challenging established gender norms, and provoking conflict within the household.[4,34–36] Our study found that provision of the microfinance-only intervention did not exacerbate the risk of past-year IPV, as compared with a matched control group; however, neither did it reduce this risk. Lower IPV risk was observed only in the IMAGE group. Qualitative data from that group suggest that reductions in violence resulted from a range of responses to the intervention that enabled women to challenge the acceptability of violence, expect and receive better treatment from partners, leave violent relationships, give material and moral support to those experiencing abuse, mobilize new and existing community groups and raise public awareness about the need to address domestic violence.[17]

This study and others suggest several potential strategies for maximizing the health and social benefits of development programmes such as microfinance. Many authors have pointed out that training content is critical in catalysing health gains, noting that it should include an explicit gender focus, raise awareness about gender roles and cultural beliefs and provide an opportunity for women to discuss often stigmatized subjects such as sexuality, HIV/AIDS and gender-based violence in a safe environment.[5,36–39] Others have stressed the importance of the training process, in particular the value of participatory, group-based learning. In HIV/AIDS education, group-based interventions have been found to foster critical analysis, collaborative learning, communication skills, problem-solving and peer support, which, in turn, have been regarded as crucial to changing social norms and increasing knowledge, skills and solidarity among women – all important aspects of empowerment.[38–42] Recognizing the broader social and political context in which women's lives are situated, many authors have also highlighted the importance of engaging the broader community, including men and boys.[5,37,41–44]

IMAGE participants were able to communicate more openly with partners and family members about sexuality, HIV and domestic violence, and to share this knowledge with others in their communities.[17,45] Many entered traditionally male-dominated domains, such as police stations, schools and football clubs, engaging with traditional leaders and also organizing numerous village meetings and marches.[17,46] In similar programmes in India, women's participation in microfinance initiatives has formed the basis for organizing around issues such as dowry, domestic violence and alcohol abuse, and in Bangladesh, microfinance programmes have mobilized members to vote for the first time in elections.[37,47] In general, however, there has been little attempt to link microfinance to wider social and political activity.

The success of the microfinance sector to date has been impressive. Across a wide range of models, reported loan repayment rates, even among the poorest clients, often exceed 95%.[48,49] Global experience has demonstrated that microfinance institutions can recover all or most of their administrative

costs through interest rates and user fees. Rapid growth and scaling-up are thus possible, even when donor funds are limited.[49] Opportunities are now emerging for microfinance institutions to broaden their scope and benefits by more directly addressing health-related concerns, including reproductive health, HIV/AIDS and gender-based violence.[9,11,12] Doing so will not make sense for every programme and population, of course, and microfinance leaders are justifiably wary of weighing down their institutions with added responsibilities. But evidence is mounting to suggest that combining economic and health interventions can create powerful synergies and broaden effects in measurable ways. In Africa, Asia and Latin America, a growing number of programmes have successfully integrated health education, without compromising core financial services or sustainability.[9,10,12,50] The time may be right for donor agencies to move beyond financial sustainability targets to encourage the kind of intersectoral partnerships that can broaden the health and social effects of microfinance and other poverty reduction programmes. Innovative and sustainable partnership models are already evolving, but further evaluation and scale-up will be vital. ■

Acknowledgements

We thank the managing director of Small Enterprise Foundation, John de Wit, and the many staff who made this work possible. We would also like to thank Prof. J Gear for his guidance and support throughout the study.

This study has been a partnership between academic institutions in South Africa (School of Public Health, University of the Witwatersrand) and the United Kingdom (London School of Hygiene and Tropical Medicine) and a South African microfinance development organization (Small Enterprise Foundation).

Funding: The study received financial support from the Anglo American Chairman's Fund Educational Trust, Anglo Platinum, the Department for International Development (United Kingdom), the Ford Foundation, the Henry J Kaiser Family Foundation, the Humanistisch Instituut voor Ontwikkelingssamenwerking (HIVOS), the South African Department of Health and Welfare and the Swedish International Development Agency. None of these funders had any role in the design and conduct of the study; the collection, management, analysis or interpretation of data; or the preparation, review or approval of the manuscript.

Competing interests: None declared.

Résumé

Évaluation des effets supplémentaires produits par la combinaison d'interventions économiques et sanitaires : étude de l'Intervention IMAGE en Afrique du Sud

Objectif Examiner si l'adjonction d'un programme de formation sur la violence liée au sexe et sur le VIH aux initiatives relevant du microcrédit peut apporter des bénéfices sur les plans sanitaire et social supplémentaires par rapport à ceux fournis par le microcrédit seul.

Méthodes Des données transversales ont été obtenues pour trois agrégats spatio-temporels sélectionnés au hasard dans des zones rurales d'Afrique du Sud : (i) quatre villages ayant bénéficié pendant 2 ans de l'Intervention IMAGE (Intervention with Microfinance for AIDS and Gender Equity), combinant une intervention de type microcrédit et un programme de formation sanitaire ; (ii) quatre villages ayant bénéficié pendant 2 ans de services de microcrédit uniquement ; et (iii) quatre villages témoins n'ayant été visés par aucune intervention. La détermination des rapports de risques ajustés (RRa) à partir de données sommaires pour les villages a permis de comparer les groupes en fonction des valeurs des indicateurs de bien-être économique, d'autonomisation, de violence exercée par le partenaire intime (VPI) et de comportements à risque pour le VIH. Les effets supplémentaires ont été estimés d'après l'amplitude et la cohérence des RRa.

Résultats Au total, 1409 sujets (uniquement des femmes, âge médian : 45 ans) ont été recrutés. Au bout de 2 ans, on a constaté des améliorations économiques par rapport au groupe témoin dans les deux groupes bénéficiant d'une intervention : celui desservi par l'Intervention IMAGE et celui ayant accès uniquement à des services de microcrédit. Néanmoins, seul le groupe bénéficiant de l'Intervention IMAGE présentait des associations cohérentes sur l'ensemble des domaines avec l'autonomisation des femmes, la violence exercée par le partenaire intime et les comportements à risque pour le VIH.

Conclusion L'adjonction d'une composante formation aux programmes de microcrédit destinés à des groupes peut être essentielle pour obtenir des bénéfices sanitaires plus larges. Les agences donatrices devraient encourager les partenariats intersectoriels propices aux synergies et élargir les effets sur le plan sanitaire et social des interventions économiques telles que la microfinance.

Resumen

Evaluación de los efectos incrementales de la combinación de intervenciones económicas y sanitarias: estudio de IMAGE en Sudáfrica

Objetivo Determinar si la inclusión de un programa de formación en materia de género y VIH en iniciativas de microfinanciación puede redundar en beneficios sanitarios y sociales superiores a los conseguidos solo mediante la microfinanciación.

Métodos Se obtuvieron datos transversales a partir de tres conglomerados emparejados seleccionados aleatoriamente en zonas rurales de Sudáfrica: (i) cuatro aldeas con dos años de exposición a la Intervención de Microfinanciación para el SIDA y la Equidad de Género (IMAGE), una intervención que combina medidas sanitarias y de microfinanciación; (ii) cuatro aldeas con dos años de exposición a servicios de microfinanciación únicamente; y (iii) cuatro aldeas de control en las que no se llevó a

cabo ninguna intervención. A partir de los resúmenes de aldea se calcularon las razones de riesgos ajustadas (RRa), con las que se compararon las asociaciones entre los grupos en relación con los indicadores de bienestar económico, empoderamiento, violencia de pareja y comportamientos de riesgo para el VIH. Los efectos incrementales se estimaron a partir de la magnitud y coherencia de las RRa.

Resultados Se reclutó en total a 1409 participantes, todas ellas mujeres, con una edad mediana de 45 años. Al cabo de dos años, tanto el grupo en el que solo se aplicó la intervención de microfinanciación como el grupo IMAGE mostraron mejoras económicas respecto al grupo de control. Sin embargo, solo en el grupo IMAGE se observaron asociaciones coherentes en todos los dominios en lo que atañe al empoderamiento de las mujeres, la violencia de pareja y los comportamientos de riesgo para el VIH.

Conclusión La inclusión de un componente de formación en los programas de microfinanciación por grupos puede ser decisiva para lograr beneficios más amplios para la salud. Los organismos donantes deberían fomentar fórmulas de colaboración intersectorial que propicien sinergias y amplíen los efectos sanitarios y sociales de intervenciones económicas como la microfinanciación.

ملخص

تقييم التأثيرات التصاعدية للجمع بين التدخلات الاقتصادية والتدخلات الصحية: دراسة (IMAGE) في جنوب أفريقيا

الغرض: استكشاف إذا ما كان إضافة برامج التدريب الخاصة بالجندر وفيروس الإيدز إلى مبادرات التمويل البالغ الصغر يمكن أن يؤدي إلى فوائد صحية واجتماعية تتخطى ما يحققه التمويل البالغ الصغر وحده.

الطريقة: استُنبطت بيانات مقطعية من ثلاث مجموعات متطابقة منتقاة عشوائياً من مناطق ريفية في جنوب أفريقيا: (1) أربع قرى جرّبت لمدة عامين التمويل البالغ الصغر من أجل الإيدز والعدالة بين الجنسين والمعروف اختصاراً بـ(IMAGE)، وهو تدخل مشترك بين التمويل البالغ الصغر والتدريب الصحي؛ (2) أربع قرى جرّبت لمدة عامين خدمات التمويل البالغ الصغير وحده؛ (3) أربع قرى استخدمت كشواهد ولم تستهدف بأي تدخل. واستخدمت معدلات الخطر المصححة باستخدام موجز عن مستوى القرية في مقارنة الارتباطات بين المجموعات من حيث مؤشرات الرفاهة الاقتصادية، والتمكين، وعنف العشير، والسلوكيات الخطرة المُعَرِّضة للإصابة بفيروس الإيدز. وقد أتاح مقدار وتطابق معدلات الخطر المصححة تقدير وجود تأثيرات تصاعدية.

الموجودات: أُدْرِجَت في البحث 1409 مشتركة، جمعيهن من النساء، ومتوسط أعمارهن 45 سنة. وبعد مرور سنتين، شهدت كل من مجموعة التمويل البالغ الصغر وحده ومجموعة التمويل البالغ الصغر من أجل الإيدز والعدالة بين الجنسين تحسناً اقتصادياً مقارنة بمجموعة الشواهد. إلا أن مجموعة التمويل البالغ الصغر من أجل الإيدز والعدالة بين الجنسين أظهرت ارتباطات ثابتة عبر جميع الميادين بالنسبة لتمكين المرأة، وعنف العشير، والسلوكيات الخطرة المعرّضة للإصابة بفيروس الإيدز.

الاستنتاج: إن إضافة مكون التدريب إلى برامج التمويل البالغ الصغر القائم على المجموعات يمكن أن يكون مؤثراً في تحقيق مزايا صحية أوسع نطاقاً. وينبغي على الوكالات المانحة تشجيع الشراكة بين القطاعات المختلفة التي تعزز التآزر وتوسع نطاق التأثيرات الصحية والاجتماعية للتدخلات الاقتصادية مثل التمويل البالغ الصغر.

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Reproductive choices for women with HIV

Rose Wilcher[a] & Willard Cates[a]

Abstract Access to reproductive health services for women with HIV is critical to ensuring their reproductive needs are addressed and their reproductive rights are protected. In addition, preventing unintended pregnancies in women with HIV is an essential component of a comprehensive prevention of mother-to-child transmission (PMTCT) programme. As a result, a call for stronger linkages between sexual and reproductive health and HIV policies, programmes and services has been issued by several international organizations. However, implementers of PMTCT and other HIV programmes have been constrained in translating these goals into practice. The obstacles include: (i) the narrow focus of current PMTCT programmes on treating HIV-positive women who are already pregnant; (ii) separate, parallel funding mechanisms for sexual and reproductive health and HIV programmes; (iii) political resistance from major HIV funders and policy-makers to include sexual and reproductive health as an important HIV programme component; and (iv) gaps in the evidence base regarding effective approaches for integrating sexual and reproductive health and HIV services.

However, we now have a new opportunity to address these essential linkages. More supportive political views in the United States of America and the emergence of health systems strengthening as a priority global health initiative provide important springboards for advancing the agenda on linkages between sexual and reproductive health and HIV. By tapping into these platforms for advocating and by continuing to invest in research to identify integrated service delivery best practices, we have an opportunity to strengthen ties between the two synergistic fields.

Une traduction en français de ce résumé figure à la fin de l'article. Al final del artículo se facilita una traducción al español. الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Effective linkages between the sexual and reproductive health and the HIV fields are essential to ensuring the reproductive rights of people living with HIV. All women, including those with HIV, have the right "to decide freely and responsibly on the number and spacing of their children and to have access to the information, education and means to enable them to exercise these rights".[1] The sexual and reproductive decisions faced by women with HIV involve their desire for pregnancy, their contraceptive practices, their choices about an unintended pregnancy, and their prenatal and postnatal options to reduce perinatal transmission of HIV (Fig. 1).[2]

For women with HIV, linkages between the sexual and reproductive health and HIV fields can maximize the opportunities to address four distinct reproductive possibilities:[2] (i) if a woman does not wish to become pregnant, she should be referred to or offered family planning services; (ii) if she wishes to become pregnant, she should be educated about the local infertility and prenatal services, the types of chemoprophylaxis available to reduce the risks of transmission to her child and, if in a sero-discordant relationship, HIV prevention approaches to minimize the risk of infection transmission to a partner when trying to conceive; (iii) if she is currently pregnant and wishes to continue her pregnancy, she should be offered the opportunity to obtain antiretroviral therapy to reduce HIV transmission risks; and (iv) if she is currently pregnant but does not wish to continue her pregnancy, she should be referred to safe abortion services. Postpartum contraception could be offered as an option for those who do not wish to become pregnant again.

Regardless of HIV status, increasing access to sexual and reproductive health services will not only offer women more control over their reproductive lives and help them safely achieve their desired fertility, but also will produce major public health benefits on maternal and infant morbidity and mortality. Voluntary contraceptive services, in particular, will benefit the health of women and infants in a variety of ways by delaying first births, lengthening birth intervals, reducing the total number of children born to one woman, preventing high-risk and unintended pregnancies, and reducing the need for unsafe abortion.

For those who are living with HIV, linking the sexual and reproductive health and HIV fields further enhances the public health impact by preventing pregnancies in women with HIV who do not wish to become pregnant. This in turn can reduce the number of infants born with HIV and the number of children orphaned due to AIDS. Indeed, prevention of unintended pregnancies in HIV-positive women is one of the four strategic elements recommended by WHO and its United Nations partners for PMTCT (Fig. 2).

Preventing unintended pregnancies

Four different analyses have confirmed the importance to PMTCT efforts of preventing unintended pregnancies in women with HIV. One study showed that moderate decreases in the number of pregnancies to HIV-infected women, ranging from 6% to 35% depending on the country, could result in numbers of averted HIV-positive births equivalent to those averted by antiretrovirals.[3] Another study demonstrated that adding family planning to PMTCT services in high-HIV prevalence countries could avert 71 000 child HIV infections compared with the 39 000 HIV-positive births averted with PMTCT only.[4] A third analysis suggested that current levels

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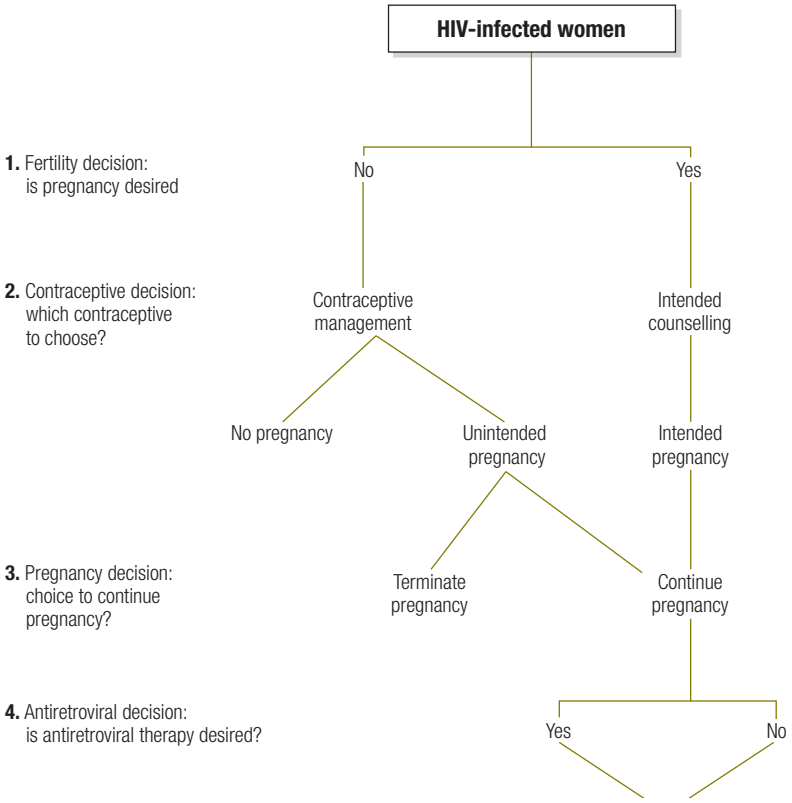
(Submitted: 15 December 2008 – Revised version received: 7 May 2009 – Accepted: 20 May 2009)

Fig. 1. **Reproductive choices for women with HIV**



of contraceptive use in sub-Saharan Africa may already be preventing 22% (or 173 000) of HIV-positive births annually, despite contraception not being widely available in Sub-Saharan Africa.[5] If all women in the region who did not wish to get pregnant accessed contraceptive services, as many as an additional 160 000 HIV-positive births could be averted every year. Finally, a similar analysis done for the focus countries of the President's Emergency Plan for AIDS Relief (PEPFAR) found that the annual number of unintended HIV-positive births currently prevented through contraceptive use ranges from 178 in Guyana to 120 256 in South Africa.[6]

Contraception is also a cost-effective PMTCT intervention. For the same level of expenditure, increasing contraceptive use through both traditional family planning services and outreach among non-users who do not want to get pregnant averts almost 30% more HIV-positive births than HIV counselling and testing coupled with nevirapine prophylaxis.[7] Moreover, adding family planning to PMTCT services would cut in half the cost of each HIV infection averted – from US$ 1300 per infection averted with treatment alone to an estimated US$ 660 with family planning.[4]

To date, most attention and resources for PMTCT programmes have gone towards implementing element 3 – the provision of antiretroviral prophylaxis to HIV-infected pregnant women. While this intervention represents a major public health achievement, the current impact of PMTCT programmes is limited by their failure to effectively link with sexual and reproductive health services and address the contraceptive needs of women with HIV. Population-based estimates of unintended pregnancies in women with HIV are not available, but selected studies of HIV-infected women suggest alarmingly high levels of unintended pregnancies, ranging from 51% to 91%.[8–11]

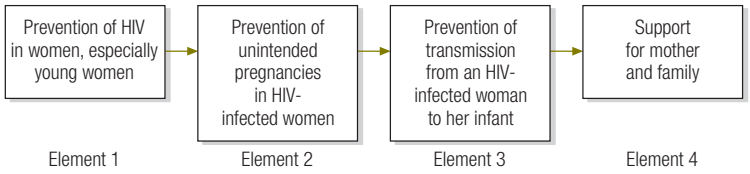
Missed connections

Why are PMTCT programmes falling short in making essential connections with sexual and reproductive health policies and programmes? Currently, PMTCT programmes are constrained by four key factors: (i) a focus on women who are HIV-positive and already pregnant; (ii) separate international funding streams for reproductive health and HIV programmes; (iii) political resistance to stronger linkages between reproductive health and HIV policies and services; and (iv) lack of evidence of effective integrated service delivery approaches.

Thinking outside the box

The point of entry for most PMTCT programmes is the antenatal care setting. The emphasis is on identifying HIV-infected pregnant women and increasing their access to prophylactic antiretroviral drugs. However, this setting is limited in its reach and its post-facto prevention approach. Only 33% of HIV-positive pregnant women in low- and middle-income countries have access to antiretroviral therapy to prevent vertical transmission.[12] Moreover, antenatal care-based PMTCT services are characterized by a "cascade effect".[13] At each step in the PMTCT process – from initial contact to HIV pre-test counselling, to HIV testing, to obtaining results, to receiving treatment and more – fewer and fewer clients access services. For HIV-positive women who are served in the antenatal care setting and followed through the postpartum period, a PMTCT programme offers multiple provider contacts, including during antenatal, intrapartum and postpartum care. With the transition into paediatric care and care for the woman, all these contacts are opportunities to present and reinforce messages about contraception for healthy timing and spacing of pregnancies and create linkages to sexual and reproductive health services. While efforts are warranted to strengthen linkages between PMTCT

Fig. 2. **Four-element strategy for perinatal HIV prevention**



and reproductive health services as they are currently organized, the impact of those linkages will be mitigated by the overall strength and reach of the base PMTCT programme. Furthermore, they will only help PMTCT clients prevent subsequent unintended pregnancies.

A more effective PMTCT programme would reach women and their partners outside of the antenatal care setting before they become infected (element 1 – prevention of primary HIV infection in women) and, if infected, before they become pregnant (element 2 – prevention of unintended pregnancies in HIV-positive women). Implementing element 2 can be accomplished two ways. One approach is to strengthen vertical family planning services. The other is to integrate family planning services into HIV prevention, care and treatment services. Both approaches, however, are hindered by international funding mechanisms.

Funding constraints

Global family planning and HIV/AIDS programmes are funded through separate mechanisms. While resources for HIV/AIDS have dramatically increased in recent years, efforts to strengthen international family planning programmes have been hampered by a decline in funding. In 2008 US$ 3600 million for HIV services went to the 15 PEPFAR focus countries compared to US$ 67.5 million for family planning/reproductive health, a greater than 50-fold difference.[14] This represented a 225% increase for HIV programmes over the 2006 allocated level and an 11% decrease for family planning/reproductive health. In addition, a severe funding shortfall currently exists for the provision of contraceptives and condoms at a global level.[15] Fortunately, funding from the United States of America (USA) for family planning increased in 2009 to US$ 545 million under the new political administration. Still, the gap between the two funding streams remains striking.

At current funding levels, the ability of international family planning programmes to reduce unmet need for contraception, including among women with HIV, is constrained. Moreover, despite unintended pregnancies accounting for 14–58% of all births in countries where the burden of HIV is the greatest, burgeoning resources for HIV/AIDS programmes in those countries are not used to support family planning programmes.[6] These funding limitations minimize the potential for existing family planning programmes to have a greater impact on the prevention of vertical transmission of HIV.

The separate funding streams for reproductive health and HIV/AIDS programmes also pose a key obstacle to efforts to integrate the two service areas, although some progress with respect to resource coordination has been observed. The Global Fund to Fight AIDS, Tuberculosis and Malaria has funded HIV/AIDS proposals with sexual and reproductive health components, and PEPFAR encourages linkages with reproductive health "wrap-around" programmes. However, neither includes contraceptive use as an indicator of programmatic success. Because "what gets measured gets done", actual implementation of contraceptive services as part of an HIV programme on the ground has not been a priority.

In some countries, the United States Agency for International Development (USAID) has acknowledged the importance of family planning/HIV integration and combined funding into a single health programme, but HIV funds comprise most of the resources and primarily support HIV service delivery. The reproductive health integration efforts are typically relegated to the limited family planning resources. Separate funding streams further hinder opportunities for linkages in recipient countries by cultivating parallel reproductive health and HIV/AIDS departments within ministries of health, which in turn create vertically oriented policies, strategies, training programmes and, ultimately, service delivery systems.[16]

Political resistance

Unfortunately, the issue of linkages between sexual and reproductive health and HIV is rooted in ideological debate. During the reauthorization of PEPFAR, some congressional views equated family planning services with abortion, implying that providing contraceptive services to women with HIV who do not want to become pregnant is "antilife".[17] As a result, while the current PEPFAR legislation supports integrating HIV activities with a range of services that AIDS-affected families may need, including nutrition, safe water and sanitation, and substance abuse services, it does not include support for linkages with sexual and reproductive health services. The exclusion of sexual and reproductive health linkages by PEPFAR contrasts with other donor countries, such as the United Kingdom, which explicitly encourage proposals that link HIV and reproductive health services. Moreover, it ignores the call for "improving the link between HIV/AIDS activities and sexual and reproductive health and voluntary family planning programmes" issued by world leaders at the Group of Eight (G8) summit in July 2008.

As the single largest funder of global AIDS programmes, the USA's current PEPFAR legislation poses a challenge both to ensuring that the reproductive health needs and rights of people with HIV are met, and also to enabling HIV prevention programmes to have the greatest possible impact. However, since the legislation passed, a new political administration has been installed in the USA. By rescinding the Mexico City Policy and reinstating funding for the United Nations Population Fund, the new administration has already acted strongly in support of women's rights and reproductive health. These actions also signal the possibility that current restrictions within PEPFAR to implement sexual and reproductive health activities will be loosened.

Gaps in the evidence base

The dearth of evidence-based best practices in this area is still another obstacle to widespread implementation of a comprehensive PMTCT programme that includes efforts to prevent unintended pregnancies in HIV-positive women. A recent systematic review of the literature on linkages between sexual and reproductive health and HIV found that integrating family planning and HIV services was beneficial and feasible.[18] However, few studies included rigorous evaluation designs that allowed for the identification of evidence-based recommendations on how to effectively link sexual and reproductive health and HIV services. Moreover, limited data exist to confirm whether the costs of providing integrated services are equal to or less than the costs of offering those services separately. In the absence of data-driven best practices, the majority of current efforts at linked programming are weak.

A recent study of family planning/HIV integrated service delivery programmes in five countries found that, even in high-performing sites, providers and systems are not prepared to offer in-

tegrated services.[19] Providers at HIV care and treatment sites and HIV counselling and testing sites, in particular, were not adequately trained in family planning, did not use job aids to support counselling on family planning, were not well supervised and had poor knowledge of safe and effective family planning methods for women with HIV. Moreover, clients of these HIV services reported receiving low levels of family planning counselling and referrals to family planning services from providers.[19]

In a separate study of a family planning/voluntary counselling and testing integration intervention in Kenya, providers' discussions about fertility desires and contraceptive methods with clients improved, though not significantly. In addition, the intervention did not result in uptake of effective contraception, despite almost one-third of clients being at risk of unintended pregnancy.[20] In Uganda, findings from a comprehensive family planning/antiretroviral therapy (ART) integration programme at a pilot site were more encouraging. The programme, which supported supply, demand and advocacy intervention activities, found that the number of ART clients accepting a family planning method increased threefold following the introduction of family planning services in the ART setting.[21]

Just as with other health services, no "one size fits all" approach to family planning/HIV service integration exists. Reports based on the aforementioned family planning/voluntary counselling and testing and family planning/ART integration experience in Kenya and Uganda, respectively, suggest that different levels of integration may be appropriate for different health care facilities or programmes.[21,22] The data suggest that on-site provision of family planning methods may be more conducive to initial contraceptive uptake than referral; however, it may not be feasible for all HIV service delivery settings to make contraceptive methods available on-site.[23] For some facilities, it may be a better use of resources to equip HIV providers to screen a client for risk of unintended pregnancy and provide a same-day referral to the family planning clinic for those who want to initiate a method. Different approaches will be required for different facilities or programmes depending on factors such as available resources, staff capacity, facility set-up, strength of the base service and scale of the HIV epidemic.

Efforts to integrate sexual and reproductive health and HIV services will require multiple technical inputs that address needs at different levels, or "building blocks", of the health system. These include service delivery, health workforce, health information system, medical products and technologies, health financing and leadership/governance.[24] For example, a health systems approach to integrating family planning into HIV services would demand consideration of inputs such as: (i) establishing mechanisms to ensure the addition of family planning services does not compromise the quality and coverage of the base HIV service (service delivery); (ii) equipping providers and supervisors with the technical knowledge and skills to address the contraceptive needs of clients with HIV (health workforce); (iii) ensuring a steady supply of contraceptives in the HIV clinic (medical products and technologies); (iv) modifying HIV programme monitoring and information systems to capture routine data on family planning services provided (health information system); (v) advocating for a line item for family planning within the national HIV programme budget (health financing); and (vi) revising relevant policies and guidelines to reflect the role of family planning within HIV service delivery settings (leadership/governance).

Ideally, these inputs will be implemented in the context of a broader, country-driven process to systematically strengthen linkages between the two fields. However, no single country or programme will be able to implement all of the possible interventions at each level and the relative importance of each intervention is not known. Without more definitive best practices for solidifying the linkages between sexual and reproductive health and HIV services, opportunities to address the contraceptive needs of clients with HIV will continue to be missed.

Towards a more comprehensive response

Despite clear evidence of the importance of contraception as an HIV prevention strategy, the prevention of unintended pregnancies in women with HIV continues to be low priority among most HIV prevention interventions. Linkages between sexual and reproductive health and HIV policies and programmes have been impeded by both political resistance and operational challenges. However, targeted advocacy in three key areas could produce substantial progress in breaking down the linkages barriers and tip support in favour of more comprehensive programming.

Engage political will

Greater political will from government leaders and HIV funders to prioritize family planning services must be reflected in both financial and technical commitments. The new political administration in the USA provides an opportunity to move past an ideological debate that hindered efforts to expand access to family planning in recent years. We must use this opportunity to advocate for increased funding for traditional family planning programmes, as well as funding for family planning within HIV programmes. The evidence of the impact and cost-effectiveness of contraception as a PMTCT intervention should be enough to warrant increases in funding for family planning programmes in high HIV prevalence countries. We hope donors and policy-makers will be motivated to use PEPFAR and other HIV funds for family planning activities within HIV programmes.

We also must continue to advocate for policy-makers and donors to embrace family planning as a core technical component of the HIV prevention, care and treatment services they fund. A PEPFAR-funded programme in Viet Nam, recently publicized by USAID as a success story, is working to expand access to comprehensive, family-centred HIV/AIDS care – including nutrition, HIV treatment, HIV prevention, care for opportunistic infections and palliative care – so that families can receive coordinated medical services "in the same facility, at the same time and by the same staff".[25] Family planning services should be an integral part of this package of care. Adding voluntary family planning services to family-centred care would represent an important step towards stronger linkages between sexual and reproductive health and HIV services, would protect the reproductive health and rights of HIV-positive clients and would enhance the HIV-prevention impact of the programme by preventing unintended pregnancies among its clients. All of these benefits are sound reasons to

advocate for the allocation of PEPFAR resources for family planning activities, as well as for making family planning a core component of guidelines for programmes reaching people living with HIV.

Position as health systems strengthening

The emergence of health systems strengthening as a priority global health initiative is a prime opportunity for advancing the agenda on sexual and reproductive health and HIV linkages. International consensus exists that progress on all health-related Millennium Development Goals will depend on the strengthening of health systems, and the influx of HIV/AIDS funding has required greater attention to health systems constraints to establishing and scaling up HIV services.[24] As a result, many HIV donors, including The Global Fund, are committed to providing funding for health systems strengthening activities.[26] Effectively integrating vertical programmes into a comprehensive approach is central to the concept of health systems strengthening. Therefore, advocating for services that address the comprehensive sexual, reproductive and HIV-related needs of individuals in the context of health systems strengthening may provide much needed traction for better sexual and reproductive health and HIV linkages. Moreover, the WHO's six building blocks of a health system provide a useful framework for a more systematic approach to strengthening linkages between sexual and reproductive health and HIV.

Investments in health systems strengthening to ensure that health workers, medicines, supplies, equipment and well-functioning facilities are in place over the long-term will naturally result in stronger linkages between sexual and reproductive health and HIV services. A recent study in Rwanda showed that adding basic HIV services funded by PEPFAR to primary health centres contributed to an increase in use of reproductive health and other services in those facilities.[27] However, as HIV donors fund initiatives to improve the underlying health systems, we must advocate not only that better sexual and reproductive health are among the health outcomes they aim to achieve with these investments, but also that the sexual and reproductive health outcomes are effectively measured.

Promote evaluation

What gets measured gets done. We must continue to advocate for investments in programme evaluation and operations research to identify best practices of linkages between sexual and reproductive health and HIV, and demonstrate their cost-effectiveness. Applying strong monitoring and evaluation components to high quality, replicable and scalable integrated services are needed to facilitate better documentation of current efforts. In addition, operations research to test the impact of integration efforts on outcomes such as contraceptive uptake, prevention of unintended pregnancies and HIV-positive births averted are greatly needed to contribute to the evidence base on linkages between sexual and reproductive health and HIV. However, generating this evidence also requires improvements in the programmes that are being evaluated. More systematic approaches to linkages between sexual and reproductive health and HIV that address the six building blocks of the health system are needed to enhance the likelihood of programmatic success.

Prior to pursuing integration of sexual and reproductive health and HIV, national ministry of health officials should consider which specific sexual and reproductive health and HIV services should be integrated given their particular country context, the extent to which they should be integrated at the facility and/or community level, and the priority action steps and interventions that are needed within the health system to achieve the desired type of integration. Stronger evidence of strategically implemented integrated service delivery approaches and the resource requirements to achieve them, in turn, will serve to improve existing programmes, inform scale-up and bolster advocacy efforts among policy-makers and donors.

Conclusion

From both a human rights and a public health perspective, the call for stronger linkages between the sexual and reproductive health and HIV fields is well-founded. All women, regardless of HIV status, have a right to make informed reproductive choices. However, because infected women may be more vulnerable to rights abuses than uninfected individuals, sexual and reproductive health and HIV linkages at policy, programme and service delivery levels are especially important to ensure their sexual and reproductive needs are met. Such linkages will also produce important gains against the HIV epidemic by ensuring women with HIV who do not wish to become pregnant have access to contraception. Preventing unintended pregnancies in women with HIV will not only improve maternal and child health but also prevent new HIV infections in infants.

Unfortunately, despite consensus that preventing unintended pregnancies in HIV-positive women is critical to achieving PMTCT goals, HIV programmes are falling short in making essential sexual and reproductive health linkages. HIV funders and policy-makers must overcome the obstacles rooted in parallel funding systems and embrace sexual and reproductive health programmes, and contraceptive services in particular, as central to HIV prevention efforts. Vertical family planning programmes and initiatives to integrate family planning services into HIV care and treatment programmes must be prioritized as key strategies for strengthening PMTCT efforts. ■

Acknowledgements

The authors thank Tricia Petruney for helping in the early draft of this manuscript.

Funding: Support for this manuscript was provided by Family Health International (FHI) with funds from the United States Agency for International Development (USAID), Cooperative Agreement Number GPO-A-00-05-00022-00.

Competing interests: None declared.

Résumé

Options à la disposition des femmes vivant avec le VIH dans le domaine de la reproduction

Pour que les besoins sur le plan de la reproduction des femmes vivant avec le VIH soient satisfaits et que leurs droits dans ce domaine soient protégés, il est essentiel que ces femmes aient accès aux services de santé génésique. En outre, prévenir les grossesses non désirées chez les femmes infectées par le VIH est une composante très importante du programme complet de prévention de la transmission de la mère à l'enfant (PTME). En conséquence, plusieurs organisations internationales ont appelé à renforcer les liens entre la santé sexuelle et génésique (SRH) et les politiques, les programmes et les services de lutte contre le VIH. Néanmoins, les personnes chargées de mettre en œuvre les programmes de PTME et autres programmes contre le VIH se sont heurtées à des obstacles dans la réalisation de ces objectifs. Parmi ces obstacles figurent : (i) la focalisation étroite des programmes de PTME actuels sur le traitement des femmes séropositives pour le VIH déjà enceintes ; (ii) l'existence de mécanismes séparés et parallèles pour le financement des programmes en faveur de la SRH et de ceux contre le VIH ; (iii) la résistance politique des principaux financeurs et décideurs politiques dans le domaine du VIH/sida à l'intégration de la SRH comme composante importante dans les programmes contre le VIH ; et (iv) les lacunes des bases d'éléments factuels relatives aux approches efficaces pour l'intégration des services de SRH et des services liés au VIH.

Cependant, une nouvelle opportunité s'offre à nous maintenant de prendre en compte ces liens essentiels. Les points de vue politiques plus favorables qui s'expriment aux États-Unis d'Amérique et l'élévation du renforcement des systèmes de santé au rang d'initiative prioritaire pour la santé mondiale fournissent un tremplin pour faire avancer les actions visant l'établissement de liens entre SRH et lutte contre le VIH. En utilisant ces bases pour plaider en faveur de tels liens et en continuant à investir dans la recherche pour identifier les meilleures pratiques intégrées de prestation de services, il sera possible de renforcer les liens synergiques entre ces deux champs d'activité.

Resumen

Opciones reproductivas para las mujeres con VIH

El acceso a los servicios de salud reproductiva por parte de las mujeres con VIH es fundamental si se quiere atender sus necesidades y proteger sus derechos en materia de reproducción. Además, la prevención de los embarazos involuntarios en las mujeres con VIH es un componente esencial de cualquier programa integral de prevención de la transmisión del virus de la madre al niño (PTMN). Como consecuencia de ello, varias organizaciones internacionales han exhortado a reforzar los vínculos entre los programas, políticas y servicios de salud sexual y reproductiva y los centrados en el VIH. Sin embargo, los responsables de la aplicación de los programas de PTMN y de otro tipo contra el VIH han tropezado con dificultades a la hora de traducir esos objetivos en medidas prácticas. Entre esas dificultades cabe citar: (i) la tendencia de los actuales programas de PTMN a limitarse al tratamiento de las mujeres VIH-positivas que ya están embarazadas; (ii) los mecanismos de financiación paralelos e independientes de los programas de salud sexual y reproductiva y los programas contra el VIH; (iii) la resistencia política de los principales agentes de financiación e instancias decisorias contra el VIH a incluir la salud sexual y reproductiva como un componente importante de los programas contra el VIH; y (iv) las lagunas que presenta la evidencia sobre las tácticas más eficaces para integrar los servicios de salud sexual y reproductiva y los de VIH.

Sin embargo, se nos presenta ahora una nueva oportunidad de abordar esos vínculos imprescindibles. El más favorable clima político reinante en los Estados Unidos y la emergencia del fortalecimiento de los sistemas de salud como una iniciativa de salud mundial prioritaria brindan una sólida plataforma para impulsar la agenda sobre los vínculos entre la salud sexual y reproductiva y el VIH. Si se aprovecha dicha plataforma para resaltar la importancia de esa cuestión y se sigue invirtiendo en investigaciones encaminadas a identificar las mejores prácticas de prestación integrada de servicios, tenemos la oportunidad de fortalecer los vínculos entre esos dos campos sinérgicos.

ملخص

الخيارات الإنجابية للمصابات بفيروس العوز المناعي البشري

يُعَدُّ الحصول على خدمات الصحة الإنجابية أمراً حاسماً للمصابات بفيروس العوز المناعي البشري لضمان تلبية احتياجاتهن وحماية حقوقهن الإنجابية. وإلى جانب ذلك، فإن تفادي الحمل غير المرغوب لدى المصابات بفيروس العوز المناعي البشري يعد من المقومات الأساسية لبرنامج الوقاية الشاملة من انتقال الفيروس من الأمهات لأطفالهن. ونتيجة لذلك، فقد ارتفعت دعوة العديد من المنظمات الدولية لربط أكثر قوة بين الصحة الإنجابية والجنسية وبين السياسات والبرامج والخدمات المتعلقة بفيروس العوز المناعي البشري. إلا أن تنفيذ كل من برامج الوقاية الشاملة من انتقال الفيروس من الأمهات لأطفالهن وغيرها من البرامج المعنية بفيروس العوز المناعي البشري قد أعاق ترجمة هذه المرامي إلى ممارسات. وتشتمل هذه العقبات على: (1) التركيز الضيق للبرامج الحالية للوقاية الشاملة من انتقال الفيروس من الأمهات لأطفالهن على معالجة الحوامل الإيجابيات لفيروس العوز المناعي البشري. (2) وجود آليات تمويل منفصلة وموازية لكل من برامج الصحة الجنسية والإنجابية وبرامج الإيدز. (3) المقاومة على الصعيد السياسي التي يبديها الممولون الرئيسيون لبرامج الإيدز وأصحاب القرار السياسي لإدراج الصحة الجنسية والإنجابية باعتبارها عنصراً هاماً من عناصر برنامج الإيدز. (4) الفجوات في قواعد البيّنات المتعلقة بالأساليب الفعالة للتكامل بين الخدمات الخاصة بالصحة الجنسية والإنجابية والإيدز.

وعلى كل حال، فإن لدينا الآن فرصة جديدة لتناول هذه الروابط الأساسية، كما أن ظهور المزيد من وجهات النظر السياسية الداعمة في الولايات المتحدة

الأمريكية وظهور أسلوب تعزيز النظم الصحية كأحد المبادرات ذات الأولوية في الصحة على الصعيد العالمي يقدمان قاعدة انطلاق هامة لتعزيز الروابط بين الصحة الجنسية والإنجابية والإيدز. وبمواصلة الاستثمار في البحوث للتعرف على أفضل الممارسات في إيتاء الخدمات الصحية المتكاملة، فإن لدينا فرصة لتعزيز الروابط بين هذين الميدانين المتآزرين.

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Back to basics: HIV/AIDS belongs with sexual and reproductive health

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Abstract The Programme of Action of the International Conference on Population and Development (ICPD) held in Cairo in 1994 offers a comprehensive framework for achieving sexual and reproductive health and rights, including the prevention and treatment of HIV/AIDS, and for advancing other development goals. The United Nations Millennium Development Goals now incorporate a target of universal access to sexual and reproductive health within the goal of improving maternal health, but combating HIV remains a separate project with malaria and tuberculosis. We present a brief history of key decisions made by WHO, other United Nations' agencies, the United Nations Millennium Project and major donors that have led to the separation of HIV/AIDS from its logical programmatic base in sexual and reproductive health and rights. This fragmentation does a disservice to the achievement of both sets of goals and objectives. In urging a return to the original ICPD construct as a framework for action, we call for renewed leadership commitment, investment in health systems to deliver comprehensive sexual and reproductive health services, including HIV/AIDS prevention and treatment, comprehensive youth programmes, streamlined country strategies and donor support. All investments in research, policies and programmes should build systematically on the natural synergies inherent in the ICPD model to maximize their effectiveness and efficiency and to strengthen the capacity of health systems to deliver universally accessible sexual and reproductive health information and services.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

The Programme of Action that was agreed upon at the 1994 International Conference on Population and Development (ICPD) presaged in its 16 chapters the eight Millennium Development Goals (MDGs): poverty eradication, universal primary education, gender equality, child health, maternal health, the control of HIV/AIDS and other diseases, environmental sustainability and partnerships.[1–4] The negotiators of the path-breaking ICPD agreement understood the interrelationships among these issues and the central importance of women's empowerment, health and human rights.[5] In particular, they knew that achieving universal access to sexual and reproductive health and protecting reproductive rights is necessary to achieve all the other goals, including the eradication of HIV/AIDS.[6,7]

The Programme of Action defined prevention, diagnosis and treatment of HIV/AIDS and other sexually transmitted infections (STIs) as one of the core elements of sexual and reproductive health services. As this brief history will show, however, HIV was diverted from sexual and reproductive health – and even from other STIs – into a separate and often competing programme and funding stream. Now, 15 years later, the *Bulletin of the World Health Organization* has invited papers on "bridging the gaps that exist" between sexual and reproductive health and HIV.[8] How did HIV/AIDS get separated from its base? What went wrong and how can it be fixed?

The ICPD consensus

When 179 Member States of the United Nations signed on to the Programme of Action of ICPD in Cairo, they agreed that countries should strive to make reproductive health care available to all persons as soon as possible, but no later than 2015 (para.7.6).[1] All primary health care and family planning facilities – directly or through referrals – were to deliver an array of essential information and services relating to family planning; abortion, where not against the law, and management of abortion-related complications in all cases; prenatal, delivery, postpartum and newborn care; and the prevention and treatment of infertility and reproductive tract and STIs, including HIV/AIDS. Information, counselling and condom distribution for HIV prevention were to be incorporated into all reproductive and sexual health services (paras 7.31–7.33). Policies and programmes were also to provide sexual and reproductive health information, education and services to adolescents; to combat sexual violence and discrimination; and to promote gender equality and human rights.

The ICPD consensus was reinforced at the Fourth World Conference on Women held in Beijing the following year.[9] Echoing the ICPD statement on reproductive rights (para. 7.3), a paragraph was added stating that the human rights of women include their right to have control over and decide freely and responsibly on matters relating to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence (para.96). Further support for the ICPD consensus was provided at the 1999 five-year review of implementation of the Programme of Action by a Special Session of the United Nations General Assembly (ICPD+5), which reiterated the goal of universal access and set benchmark indicators to measure progress (unmet need for family planning, access to skilled birth attendants and

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(Submitted: 14 March 2009 – Revised version received: 1 July 2009 – Accepted: 11 August 2009)

emergency obstetric care, and young people's knowledge of how to prevent HIV infection).[10,11]

In 2004, the United Nations "ICPD at Ten" review and appraisal, which included six regional meetings, reaffirmed yet again the essential goals and principles of the Programme of Action, although reviewers noted that many countries were likely to fall short of the agreed goals by 2015.[12] In a separate action, world leaders from 85 countries (and hundreds of other notables) signed a statement of support for ICPD's "vision of human development, social justice, economic progress and environmental preservation" and called on the international community, national governments and private philanthropic organizations to prioritize and fund the ICPD Programme of Action.[13] The anniversary year was also marked by the adoption at the 57th World Health Assembly of a comprehensive global *Reproductive health strategy to accelerate progress towards the attainment of international development goals and targets*.[14] Based on ICPD priorities, the global strategy urged more rapid progress in improving pregnancy, childbirth and newborn care; promoting family planning; preventing unsafe abortion; controlling STIs, including HIV; and reducing inequities related to gender, adolescence, poverty and access to health services. In 2005, the United Nations General Assembly review of the MDGs renewed international commitment to achieving universal access to reproductive health by 2015 as part of the global strategy for eradicating poverty, improving maternal and child health, promoting gender equality and combating HIV/AIDS.[15]

It would seem from these events that the ICPD agenda was firmly established in the hearts and minds of international and national policy-makers. Or was it? Some thought otherwise. In 2006, the editor of the *Lancet* marked the launch of a series of articles (and a "campaign") on sexual and reproductive health by noting that the issue had been "utterly marginalized from the global discourse about health and wellbeing"[16] – quite apart from its displacement by HIV/AIDS in the competition for donor funding.[17] Importantly, what was intended as a comprehensive health and development programme was being delivered piecemeal, thus greatly undermining its potential.

Separation from its base

In the 15 years following ICPD, key organizational and funding decisions by United Nations agencies (including WHO) and by major donors were to undermine the integrity of the ICPD sexual and reproductive health and rights concept and agenda. The location of HIV/AIDS in the larger scheme of things was especially marked by disputes and contradictions. Inconsistencies within WHO appeared long before ICPD, however. In 1948, the prevention and control of venereal diseases was declared a priority programme by WHO's first Executive Board. Four decades later, in the year following the second International Conference on AIDS in Paris in June 1986, WHO produced a strategic plan of work and established what was later to be called the Global Programme on AIDS. The first *Global strategy for the prevention and control of AIDS* adopted by the World Health Assembly in 1987 did not explicitly address other STIs, however, nor did it reflect WHO's ongoing work in this area, which meant that a crucial opportunity for joint planning was missed at the start.

WHO's work on STIs did become formally integrated into the Global Programme on AIDS in 1991 as a discrete unit reporting to its director, a logical coupling that would last in one form or another for more than a decade. Although the Global Programme was disbanded in 1995 (to be replaced by the United Nations Joint Programme on AIDS, as discussed later), a small Office of HIV/AIDS and Sexually Transmitted Diseases was created within WHO to mainstream these activities within the Organization and to liaise with external partners. In 1998 the Office was reconstituted as the WHO Initiative on HIV/AIDS and STIs. But the joint initiative did not last long. In 2002, STIs (but not HIV) were moved into the Department of Reproductive Health and Research in the Family and Community Health cluster. HIV/AIDS – which had become a separate department in the same cluster – was sent off the following year to the newly formed Cluster on HIV/AIDS, Tuberculosis and Malaria, where it remains to this day. What happened?

To answer this question, we must go back to 1994: the year of ICPD. The WHO Executive Board – under pressure from bilateral donors, AIDS activists and United Nations agencies who were unhappy with the way the Global Programme on AIDS was functioning at WHO – endorsed a plan for a new Joint United Nations Programme on AIDS co-sponsored by WHO, United Nations Children's Fund, United Nations Development Programme, United Nations Educational, Scientific and Cultural Organization, United Nations Population Fund and The World Bank.[18,19] Four more United Nations sponsors signed on later. The Joint United Nations Programme on HIV/AIDS (UNAIDS) opened its doors on 1 January 1996, 15 months after the world's governments had signed on to the ICPD agenda. Its mission was to coordinate the tracking of the AIDS epidemic across agencies, to serve as a major source of globally relevant policy on AIDS and to promote a range of multisectoral approaches and interventions.

The ICPD Programme of Action would seem to have offered the new Joint Programme on AIDS an ideal framework for making the economic, social, educational, health systems and technological investments needed for HIV prevention and health-care services. The timing was certainly perfect. But AIDS advocates and researchers had long been committed to a different agenda and UNAIDS was to go its separate way. The *Global strategy framework on HIV/AIDS* issued by UNAIDS in 2001 took a predominantly epidemiological approach to the prevention and management of HIV with a focus on "high-risk" groups such as sex workers, injecting drug users and men who have sex with men.[20] Although the strategy document claimed that successful responses to the epidemic must have their "roots in communities", nothing was mentioned about strengthening primary health systems and incorporating HIV prevention, counselling, testing and treatment into the full array of community-based sexual and reproductive health services as agreed at ICPD. In a 290-page history of the first ten years of UNAIDS, ICPD is mentioned only once (in connection with the missed ICPD+5 targets relating to young people's knowledge of HIV prevention methods), and the words "reproductive health" do not appear in the index at all.[18]

The gap widens

The global launch of the MDGs introduced yet another deviation of HIV from sexual and reproductive health. An outcome of the United Nations Millennium Declaration adopted by 189 Member States in 2000,[2] the MDGs offered a framework for measuring progress towards interrelated social, economic and environmental goals that broadly reflected the ICPD commitments. There was a crucial omission, however: the ICPD goal of universal access to sexual and reproductive health.[6,7] Rather, MDG 5 – improving maternal health – was to be measured by reductions in maternal mortality, primarily through improving women's access to skilled assistance at childbirth. Combating HIV/AIDS was placed in MDG 6 along with malaria and other infectious diseases, as though HIV were transmitted by mosquitoes or waterborne parasites rather than by human sexual and reproductive behaviour. It was not until 2007 that a target of universal access to reproductive health by 2015 was added to MDG 5 in response to intense work by a consortium of "pro-ICPD" agencies and nongovernmental organizations. This was good news for its advocates, of course, but it did not solve the segregation problem. Sexual and reproductive health was in one MDG, HIV/AIDS in another.

The decoupling of HIV from the sexual and reproductive health agenda was to become further institutionalized in the Global Fund to Fight AIDS, Tuberculosis and Malaria, which held its first organizational meeting in January 2002.[18] Providing a channel for donor contributions to countries, the Global Fund took a vertical approach to disease control rather than a horizontal approach to building health-system capacities. Most of its HIV/AIDS money went into treatment. HIV prevention in the general population of married women and the provision of comprehensive sexuality education and health services to adolescents appeared not to have any priority.[21] Once again the editor of the *Lancet* had cause to lament. "From the very beginning of the global response to the AIDS pandemic," he wrote in 2008, "prevention has been marginalized. Treatment has dominated. This systematic imbalance in clinical and public-health programmes is largely responsible for the fact that around 2.5 million people become newly infected with HIV each year."[22]

Multiplication of global strategies

Meanwhile, UNAIDS and WHO had been producing separate global strategies for dealing with reproductive health, STIs and HIV/AIDS. Each recommended its own in-country strategic plans, priority-setting exercises and monitoring systems, to the undoubted confusion of government ministries and health-care providers around the world. In 2003, WHO launched a *Global health-sector strategy for HIV/AIDS, 2003–2007,* originating from the Department of HIV/AIDS,[23] despite the fact that UNAIDS had produced its own *Global strategy framework on HIV/AIDS* in 2001.[20] In 2004, WHO's global *Reproductive health strategy* urged immediate action on key dimensions of sexual and reproductive health and rights that included the prevention and treatment of STIs/HIV.[14] A fourth WHO initiative appeared in 2007 with the publication of the *Global strategy for the prevention and control of sexually transmitted infections, 2006–2015*,[24] accompanied by a companion strategy for the *Global elimination of congenital syphilis*.[25] Both of these documents called (rather plaintively, it would seem) for "strengthening the linkages" between the prevention and treatment of other STIs and HIV. But who was listening? In 2008, a WHO/United Nations Population Fund technical consultation on national-level monitoring of the new MDG target for achieving universal access to reproductive health (that included monitoring the linkages between sexual and reproductive health and HIV) had eight participants from WHO's Department of Reproductive Health and Research, which was coordinating the Inter-Agency Working Group on strengthening linkages between the two lines of work, and none from the Department of HIV/AIDS or UNAIDS.[26]

UNAIDS had also launched its "three ones" campaign in which countries were to have one HIV/AIDS framework, one AIDS coordinating authority and one country-level monitoring and evaluation system.[18] Intended to reduce the confusion of competing plans, personnel, approaches and lines of authority, the "three ones" have a stand-alone quality. There is little room for the idea of national strategies for HIV prevention and care that are developed and implemented within the framework of ICPD, the WHO global *Reproductive health strategy*, and national strategies for achieving the MDGs. Nor is there much room in current segregated service delivery structures for adding HIV prevention, care and support to the full spectrum of sexual and reproductive health services – and vice versa – even though integration would be cost-effective and help to break the chain of sexual and reproductive ill health at crucial information and service delivery points in people's lives.

Bringing the elements back together

What can be done to restore the conceptual and organizational integrity of current approaches to sexual and reproductive health? Assuming that major organizational restructuring is not likely in most instances for now, we propose five principles for priority setting that could be adopted by international agencies, donors, national governments and nongovernmental organizations. Applying these principles could make a significant difference in programmatic decision-making, even where there is little intra-organizational collaboration or integration.

First, renew or encourage new institutional commitments to achieving the Programme of Action of ICPD. At the heart of the ICPD consensus – and now a target of the MDGs – is universal access to sexual and reproductive health and the protection of human rights. In April 2009, government representatives to the United Nations Commission on Population and Development issued a strong call for full implementation of the Programme of Action of ICPD and emphasized the essential contribution of several key actions to achieving internationally agreed development goals and the MDGs.[27] Although every organization has its own mandate, leadership can assign higher priority to key actions relating to sexual and reproductive health and rights, including HIV/AIDS. An example is a statement by Michel Sidibé, Executive Director of UNAIDS, appointed in December 2008: "First, give women and girls the power to protect themselves from HIV…This requires investment in universal access to comprehensive sexual and reproductive health services… [and also] universal access to sexuality education. Such

education provides full and accurate information; it promotes gender equality and respect for human rights. This will help young people develop the skills for mutual consent in sex and marriage and put an end to violence and sexual coercion."[28] Each organization can also re-orient its programme of work in more powerful and explicit ways to address the ICPD goals.

Second, invest in health systems capacity building with priority attention to universally accessible comprehensive sexual and reproductive health services, especially at the primary level.[29] The Global Fund, for example, has taken important steps in this direction recently by allowing countries to apply for health system support and funding of reproductive health services. The new multi-donor, multi-country International Health Partnership promotes health system strengthening with outcome indicators that include advances in sexual and reproductive health.[30]

Third, prioritize prevention programmes in schools, communities and health systems that provide information and counselling on the positive aspects of sexual and reproductive health as well as on how to avoid STIs/HIV, unwanted pregnancies, sexual coercion and gender-based violence, including special efforts to reach young people and marginalized groups. Countries as diverse as Brazil, Cameroon, Nigeria, Pakistan and Peru are moving in this direction, with increasing numbers of creative efforts to stop sexual coercion and violence against women and girls.[31]

Fourth, assist countries to incorporate sexual and reproductive health and rights fully into their national, district and local-level HIV/AIDS control programmes and, conversely, to incorporate HIV prevention and treatment into all aspects of sexual and reproductive health information and services. Over time, it is essential for countries to work towards unified policies and strategies rather than maintaining separate programmes, and to harmonize their planning with the achievement of the MDGs.

Fifth, bilateral and multilateral donors have wide scope to amend their HIV/AIDS policies and budgets to invest in sexual and reproductive health and rights. Several European governments have recently revised their policies, recognizing that HIV/AIDS is a sexual and reproductive health issue,[32–35] and renewed commitments from the United States of America will provide additional leadership from bilateral donors. Implementation remains a challenge, however, including fostering close working relationships and collaboration between previously separate staff and lines of work and achieving better balance between budgets for HIV/AIDS and the other components of sexual and reproductive health and rights.

Given the costs entailed in building global health capacity and the economic distortions of the current economic crisis, it is incumbent on all institutions to identify and promote the powerful synergies among policy and programme interventions to maximize the effectiveness and efficiency of health investments. Appeals for "collaboration" or "bridging the gaps" or "strengthening linkages" between HIV/AIDS and sexual and reproductive health and rights are far from sufficient.[8,36] What is needed is a reaffirmation of – and a greatly increased investment in – the conceptually and structurally coordinated ICPD approach to sexual and reproductive health and rights by United Nations agencies, donors, governments and nongovernmental organizations. Only then will the full range of the MDGs, including the goal of reversing the spread of HIV/AIDS, be achieved. ■

Acknowledgements

We thank Francis J Ndowa and Benjamin Nkowane of WHO for their assistance in documenting the early history of STIs and HIV/AIDS within the Organization.

Funding: Support for this work was provided by the International Women's Health Coalition, New York.

Competing interests: None declared.

Résumé

Un retour aux sources s'impose : le VIH/sida relève de la santé sexuelle et génésique

Le programme d'action de la Conférence internationale sur la population et le développement (CIPD), qui s'est tenue au Caire en 1994, offre un cadre global pour la réalisation de la santé sexuelle et génésique et des droits connexes, y compris la prévention et le traitement du VIH/sida, et pour la progression vers d'autres objectifs en matière de développement. Parmi les objectifs du Millénaire pour le développement, celui portant sur l'amélioration de la santé maternelle intègre maintenant une cible consistant en l'accès universel à la santé sexuelle et génésique, mais la lutte contre le VIH continue de relever, avec le combat contre le paludisme et contre la tuberculose, d'un projet séparé. Nous présentons ici un bref historique des grandes décisions prises par l'OMS, les autres agences des Nations Unies, le Projet du Millénaire des Nations Unies et les principaux donateurs, qui ont conduit à la séparation du VIH/sida de son ancrage programmatique logique : la santé sexuelle et génésique et les droits connexes. Cette séparation dessert la réalisation des deux séries de cibles et d'objectifs. En préconisant le retour à l'organisation originale du cadre d'action de la CIPD, nous appelons à un renouvellement de l'engagement des dirigeants, à des investissements dans les systèmes de santé pour qu'ils délivrent des services de santé sexuelle et génésique complets incluant la prévention et le traitement du VIH/sida, à la proposition de programmes complets à l'intention de la jeunesse, à la rationalisation des stratégies nationales et à un soutien des donneurs. Tous les investissements consentis en faveur de la recherche, des politiques et des programmes doivent systématiquement tirer parti des synergies naturelles dans le modèle de la CIPD pour produire une efficacité maximale et pour renforcer la capacité des systèmes de santé à délivrer des informations et des services en matière de santé sexuelle et génésique universellement accessibles.

Resumen

Vuelta a los orígenes: el VIH/sida forma parte natural de la salud sexual y reproductiva

El Programa de Acción de la Conferencia Internacional sobre la Población y el Desarrollo (CIPD) celebrada en El Cairo en 1994 ofrece un marco integral para alcanzar la meta de la salud sexual y reproductiva y los derechos conexos, en particular la prevención y el tratamiento de la infección por VIH/sida, así como para avanzar hacia otros objetivos de desarrollo. Los Objetivos de Desarrollo del Milenio de las Naciones Unidas incorporan hoy la meta del acceso universal a la salud sexual y reproductiva dentro del objetivo de mejora de la salud materna, pero la lucha contra el VIH sigue formando parte de un proyecto independiente junto con la malaria y la tuberculosis. Se presenta aquí sucintamente la historia de algunas decisiones clave, tomadas por la OMS, otros organismos de las Naciones Unidas, el Proyecto del Milenio de las Naciones Unidas y algunos donantes importantes, que han llevado a aislar la infección por VIH/sida de la base programática que lógicamente le corresponde en el terreno de la salud sexual y reproductiva y los derechos conexos. Tal fragmentación es una traba para el logro de esos objetivos y metas. Instando a retomar el concepto original de la CIPD como un marco para la acción, propugnamos la renovación del compromiso de liderazgo, la realización de inversiones en sistemas de salud orientadas a proporcionar servicios integrales de salud sexual y reproductiva, incluidos la prevención y el tratamiento de la infección por VIH/sida, la aplicación de programas integrales dirigidos a los jóvenes, la racionalización de las estrategias de los países y el apoyo de los donantes. Todas las inversiones en investigación, políticas y programas deben aprovechar sistemáticamente las sinergias naturales inherentes al modelo de la CIPD para optimizar su eficacia y eficiencia y fortalecer la capacidad de los sistemas de salud para proporcionar información y servicios de salud sexual y reproductiva universales.

ملخص

العودة إلى الأساسيات: الإيدز والعدوى بفيروسه ينتمي إلى الصحة الجنسية والإنجابية

يقدم برنامج العمل للمؤتمر الدولي حول السكان والتنمية الذي عقد في القاهرة عام 1994 إطاراً شاملاً لإحقاق الحقوق وبلوغ الصحة الجنسية والإنجابية، والتي تشمل الوقاية من الإيدز والعدوى بفيروسه ومعالجته والتقدُّم صوب المرامي الإنمائية الأخرى. وتضم المرامي الإنمائية للألفية التي تبنتها الأمم المتحدة في الوقت الراهن هدف الإتاحة الشاملة للصحة الجنسية والإنجابية ضمن مرمى تحسين صحة الأمومة، إلا أن مكافحة الإيدز لاتزال مشروعاً منفصلاً مع الملاريا والسل. ويقدم الباحثون في هذه الورقة عرضاً تاريخياً موجزاً للقرارات التي اتخذتها منظمة الصحة العالمية ووكالات الأمم المتحدة الأخرى ومشروع الأمم المتحدة للألفية، والجهات المانحة الكبرى، التي قادت فصل الإيدز عن قاعدته البراغماتية المنطقية ضمن الحقوق والصحة الجنسية والإنجابية. فقد أدى هذا التجزيء إلى إعاقة بلوغ مجموعتي المرامي والأغراض المتوخاة. وإذ يحث الباحثون على العودة إلى الهيكلية الأصلية لبرنامج العمل للمؤتمر الدولي حول السكان والتنمية واعتباره إطاراً للعمل؛ فإنهم يدعون لتجديد الالتزام لدى القيادات، والاستثمار في النظم الصحية لإيتاء خدمات شاملة في الصحة الجنسية والإنجابية، والتي تشمل الوقاية من مرض الإيدز والعدوى بفيروسه ومعالجته، والبرامج الشاملة للشباب، وتعميم استراتيجيات البلدان ودعم الجهات المانحة. وينبغي أن تبنى جميع الاستثمارات في البحوث والسياسات والبرامج بناءً منهجياً على التآزر الطبيعي المتأصل ضمن نموذج برنامج العمل للمؤتمر الدولي حول السكان والتنمية للحصول على أكبر قدرٍ من الفعالية والكفاءة ولتعزيز قدرات النظم الصحية على إيتاء خدمات ومعلومات متاحة إتاحة شاملة في مجال الصحة الجنسية والإنجابية.

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Progress on scaling up integrated services for sexual and reproductive health and HIV

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Abstract This paper considers new developments to strengthen sexual and reproductive health and HIV linkages and discusses factors that continue to impede progress. It is based on a previous review undertaken for the United Kingdom Department for International Development in 2006 that examined the constraints and opportunities to scaling up these linkages. We argue that, despite growing evidence that linking sexual and reproductive health and HIV is feasible and beneficial, few countries have achieved significant scale-up of integrated service provision. A lack of common understanding of terminology and clear technical operational guidance, and separate policy, institutional and financing processes continue to represent significant constraints. We draw on experience with tuberculosis and HIV integration to highlight some lessons. The paper concludes that there is little evidence to determine whether funding for health systems is strengthening linkages and we make several recommendations to maximize opportunities represented by recent developments.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* **الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.**

Introduction

The importance of developing links between sexual and reproductive health and HIV services is widely recognized. Four priority areas for linkages – learning HIV status, promoting safer sex, optimizing links between HIV and sexually transmitted infection services and integrating HIV with maternal and infant health – could lead to significant public health benefits and improve efficient use of resources.[1]

This paper argues that, despite growing evidence that links between sexual and reproductive health and HIV services are feasible and beneficial, few countries have achieved significant scale-up of integrated services. It also looks at recent developments that represent opportunities to strengthen linkages and factors that impede progress. The paper follows recent usage of the term "linkages" as a generic description of links between policies, programmes and services.

Recent developments

Increased international commitment

This decade has witnessed greater commitment to sexual and reproductive health and HIV linkages (Table 1). More recent opportunities include policy developments within the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) to accept proposals that form linkages with sexual and reproductive health within the overall frameworks of HIV, tuberculosis (TB) and malaria. Also, there has been renewed commitment by the United States of America (USA) to international sexual and reproductive health through support of the United Nations Population Fund and the repeal of the Mexico City Policy, also known as the "global gag rule", a United States government policy that prohibited nongovernmental organizations from receiving federal funding for performing or promoting abortion services in other countries.

Health systems strengthening

Greater financing of health systems strengthening to deliver universal access targets and the health Millennium Development Goals can potentially address health system constraints that currently hinder the scale-up of integrated services.

The Global Fund Five-Year Evaluation notes that 35% of approximately US$ 4 billion has been directed to key health systems elements such as human resources, infrastructure and monitoring and evaluation, with round 7 approving US$ 86 million for cross-cutting funds supporting health systems.[7] Furthermore, the proportion of funds for health systems strengthening is likely to increase in the future through the Global Fund's policy of national strategy applications from 2010.

Bilateral donors are also increasing resources for health systems strengthening and are prioritizing stronger linkages between sexual and reproductive health and HIV in the process. For example, the global AIDS strategy of the United Kingdom's Department for International Development commits US$ 6 billion up to 2015 for services that integrate HIV, TB, malaria and sexual and reproductive health including maternal/child health services. AusAID, the Australian government's overseas aid programme's new HIV strategy promotes the integration of HIV services into primary health care and is strengthening linkages between HIV services and TB, maternal/child health and sexual and reproductive health services. The reauthorization of the United States President's Emergency Plan for AIDS Relief (PEPFAR) emphasizes a continuation of HIV treatment but plans to collaborate with programmes such as malaria, TB and maternal/child health.

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(*Submitted: 6 January 2009 – Revised version received: 20 July 2009 – Accepted: 13 August 2009*)

While additional funding for health systems strengthening offers the potential to strengthen sexual and reproductive health and HIV linkages, there is currently little documented evidence or case studies of where this is happening. The recent Global Fund Five-Year Evaluation reports that integration of prevention of mother-to-child transmission with general maternal care services still needs considerable expansion of scope.[7]

Emerging evidence of benefits

There is a growing body of evidence that shows the potential benefits of strengthening these linkages. A systematic review of evidence, *Sexual & reproductive health and HIV. Linkages: evidence review and recommendations*,[8] examined linkages between services and identified the benefits as: (i) improved access to and uptake of services; (ii) better access to appropriate sexual and reproductive health services for people living with HIV/AIDS; (iii) reduced HIV-related stigma and discrimination; (iv) improved coverage of sexual and reproductive health services in key populations; (v) increased dual protection against unintended pregnancy, HIV and other sexually transmitted infections; (vi) improved provider motivation and quality of care; (vii) reduced duplication of effort and competition for resources; (viii) enhanced programme effectiveness and efficiency; and (ix) better utilization of scarce human resources for health. The review concluded that linking sexual and reproductive health and HIV is feasible, especially in family planning clinics, voluntary counselling and testing centres and HIV clinics. Positive outcomes reported included improved access to and uptake of services such as HIV testing and increased condom use. Where the cost-effectiveness of integrated services was measured, there appeared to be net savings from integrating HIV (and sexually transmitted infection) prevention into maternal/child health services. As an indicative example, experience from Haiti suggests it is both feasible and beneficial to use voluntary counselling and testing services as an entry point to integrating a broader range of sexual and reproductive health services (Box 1).

Table 1. **Key international commitments and developments supporting sexual and reproductive health and HIV linkages since 2001**

Year	Commitment or development
2001	*United Nations General Assembly Special Session on HIV/AIDS Declaration of Commitment on HIV/AIDS*, which linked achievement of HIV-prevention targets to delivery of an integrated set of interventions, including antenatal care, HIV testing and counselling, HIV-related care, treatment and support services, and appropriate sexual and reproductive health services across the wider health sector[2]
2004	*Glion Call to action on family planning and HIV/AIDS in women and children*,[3] which focuses on linkages between family planning and prevention of mother-to-child transmission; and the *New York Call to commitment: linking HIV/AIDS and sexual and reproductive health*,[4] which highlights the public health rationale for integration
2005–2008	G8 commitment to reaching as close as possible *universal access* to HIV prevention, care and treatment services by 2010 including support for integration of HIV interventions with wider health services including maternal and child health, sexual and reproductive health and tuberculosis;[5] reinforced by the June 2006 *United Nations General Assembly high level meeting on AIDS*, 2007 and 2008 G8 Summits
2006	*Political Declaration on HIV/AIDS*,[6] which challenged the global health community to forge closer linkages between sexual and reproductive health and HIV through better policy and programme coordination

Success factors

Experience of scaling up integrated services for TB and HIV highlight several important success factors. In this case, setting national targets for collaborative activities facilitates implementation and helps to mobilize political support and stakeholders' engagement from both programmes. Creating a strong policy environment with appropriate policy and operational guidelines and training manuals has proved critical. Task delegation to front-line workers (such as capacity for HIV testing and counselling) and ensuring a regular supply of HIV test kits, drugs and commodities are also important factors (H Getahun, F Scano, P Nunn, unpublished data, 2008). Strong political leadership, effective national management and joint sexual and reproductive health/HIV policy and coordination mechanisms appear to be critical to building successful linkages. Kenya and Zambia have shown that, where there is strong commitment, progress can be achieved in scaling up prevention of mother-to-child transmission programmes through integration with mother/child health services (Box 2).[10]

Box 1. **The Haiti experience of scaling up integrated sexual and reproductive health and HIV services**

In Haiti, the GHESKIO (the Haitian Group for the Study of Kaposi's Sarcoma and Opportunistic Infections) programme began by offering voluntary counselling and testing and treatment for opportunistic infections but has now integrated a wide range of sexual and reproductive health and HIV services. Voluntary counselling and testing has been used as a gateway to providing additional services that have been phased in over time e.g. diagnosis and treatment of sexually transmitted infections, diagnosis and treatment of tuberculosis, family planning services, antiretroviral therapy and maternal/child health programmes including prevention of mother-to-child transmission. GHESKIO has been an important driver of policy and practice, developing a model of integrated service provision that has been rolled out to 22 public and private health centres.[9]

Challenges

Despite increased commitment and financing, scaling up linkages and integrated services has been modest. Some of the major impediments and progress in addressing constraints are discussed here.

Weak global governance

A powerful guiding institution for sexual and reproductive health and

HIV is lacking. United Nations agencies have played a key role in providing technical support but until recently no one agency has emerged to champion these linkages. Linkages have been slow to develop institutionally, with documentation and guidance notes for countries only emerging since 2007. Progress is being made to address these weaknesses: in 2008 a WHO-led Inter-Agency Working Group on sexual and reproductive health and HIV linkages with participation from civil society, networks of people living with HIV, donor and United Nations agencies was established. This group aims to accelerate progress towards universal access targets through stronger engagement between sexual and reproductive health and HIV programmes, ensuring people living with HIV have access to the full range of sexual and reproductive health services they need.

Unclear definitions and scope

Unclear definitions have hindered progress, with policy and technical guidance referring to sexual and reproductive health and HIV "synergies", "linkages", "convergence", "mainstreaming" and "integration". This has not helped understanding or implementation. A related challenge is the wide range of services that potentially fall under the umbrella of sexual and reproductive health, making it difficult to define the scope of linkages. The Inter-Agency Working Group is developing a set of definitions, terms and indicators to promote greater understanding. One of the key lessons from the TB/HIV response has been the importance of developing globally accepted definitions, an agreed vision of "collaboration" between the two programmes and the practical meaning of "integration" of services at primary health care level. This crucial first step provided the platform for follow-on policy development and operational guidance and training for TB/HIV (H Getahun, F Scano, P Nunn, unpublished data, 2008).

Different perspectives and ideology

Experience from TB/HIV shows that, despite conceptual, practical and cultural differences between the programmes, stakeholders used the primary health care system as the platform for effective collaboration and delivery of integrated services, and stakeholders coalesced around a clear advocacy agenda of "dual epidemics" and the links between the two diseases. Finding a common platform between sexual and reproductive health and HIV actors has been more difficult.

Sexual and reproductive health is an area where different perspectives and ideologies have affected the provision of integrated services. For example, the implementation of the Mexico City Policy and the Global AIDS Act 2003 by the former Bush administration of the USA limited the capacity of HIV programmes to address the full range of needs of their clients with efforts focusing on less controversial services, such as family planning and voluntary counselling and testing programmes.[11] President Obama's overturn of the Mexico City Policy, the restoration of funding to the United Nations Population Fund, and a shift towards evidence-informed policy should help strengthen the enabling environment for linkages.

Negative attitudes and biases of providers towards people living with HIV also influence the provision of integrated services. Health-care workers may feel uncomfortable talking about sexual or risky behaviours to people with HIV who have same-sex partners, engage in sex work or inject drugs. As a result they may avoid discussing safer sex options or the wider sexual and reproductive health needs of people with HIV.[12]

Separate arrangements

International and national policy and programme responses have historically been separate. Poor representation of sexual and reproductive health stakeholders in national HIV policy and coordination structures such as national AIDS commissions and the Global Fund's country coordinating mechanisms reduces opportunities to develop integrated policies and programmes. Separate or earmarked funding also reduces opportunities for linkages by making budgeting and accounting of integrated services difficult. The largest funding mechanisms for HIV, the Global Fund and PEPFAR, link their financial disbursements to targets and indicators that specify HIV-related outputs. This creates strong incentives to deliver "quick wins" and rapid coverage at the cost of longer-term horizontal approaches that strengthen health services but may be more complex to organize and manage programmatically.[13]

Some countries are making progress through the development of joint policies, task forces and cross-programme working groups. Greater emphasis on donor coordination processes would seem to strengthen arguments for the cost-effectiveness of pursuing linkages and offer potential to strengthen these linkages through greater alignment of national health and HIV plans, joint assessment processes and greater involvement of civil society in setting priorities for health and HIV plans. The Global Fund five-year evaluation underscored the need to accelerate efforts to harmonize, align and manage aid better. Growing pressure to fulfil the principles of the Paris Declaration on aid effectiveness[14] and programme funds through less vertical approaches may potentially promote sexual and reproductive health and HIV linkages in the long term.

Limited funding

Recent funding trends show significant sums earmarked for HIV, while funding for sexual and reproductive health has declined in relative terms. Between 1995 and 2005, the HIV share of development assistance population funds increased from 9% to 43%, but for family planning fell from 55% to 23%.[15] Financing for maternal health services is

Box 2. **Joint task forces and working groups facilitate scale-up of services**

In Kenya, PMTCT is integrated with antenatal care and other maternal/child health services. A PMTCT task force brings together HIV and sexual and reproductive health stakeholders and has facilitated the development of joint guidelines and protocols. Efforts to improve basic antenatal care services alongside introducing PMTCT have increased the number of new clients, acceptance of HIV counselling and testing and uptake of antiretroviral prophylaxis. The PMTCT working group in Zambia requires donors to support all elements of antenatal care. The PMTCT post funded by the Global Fund is based in the Reproductive Health Division, which is facilitating integration of PMTCT into maternal health services.

PMTCT, prevention of mother-to-child transmission

Bull World Health Organ 2009;87:846–851 | doi:10.2471/BLT.08.059279

falling, according to a recent analysis for the Countdown to 2015 project.[16]

To date, funding for linkages and integrated services from significant donors such as PEPFAR has been limited.[17] In the case of the Global Fund, a systematic analysis of elements of sexual and reproductive health in approved HIV proposals suggests that, although national level stakeholders see the opportunity for funding linkages, many missed opportunities still exist.[18]

However, countries are beginning to make use of international funds to support the scale-up of linkages. For example, Avahan, the US$ 330 million Gates Foundation AIDS initiative in India, is also supporting the Aastha Project which has developed a model for potential scale-up in which sexually transmitted infection clinics act as hubs for the provision of family planning and HIV services to sex workers.[19] Countries are starting to use Global Fund grants for strengthening linkages (Box 3) and there is evidence that disease-targeted funding can have a positive impact on non-targeted health services. For example, data from Rwanda show a significant correlation between HIV interventions and improved antenatal care services and family planning.[21]

Box 3. **Making the most of the money in Mongolia**

Mongolia's round 7 grant from the Global Fund focuses on two main areas: health systems strengthening and sexual and reproductive health integration with HIV services. Funding is supporting outreach services and peer education, including sexual and reproductive health education for commercial sex workers; integrating diagnosis and treatment of sexually transmitted infections with voluntary counselling and testing services; promoting condoms for dual protection; improving referral systems (in this case not all services are provided at the same site). Funding for sexual and reproductive health and HIV is provided through an integrated mechanism rather than through separate channels.[20]

Health system weaknesses

Management and supervision of integrated services is more complex than managing vertical programmes, but these functions lack capacity in many countries. Health worker shortages, inadequate infrastructure and equipment and poor procurement and supply management systems are also significant challenges to provision and scale-up of integrated services (Box 4).

Provision of integrated services also places considerable demands on health workers but few receive appropriate training and technical guidance. Health workers may lack the confidence, skills, training and incentives required to take on new tasks or resent the extra workload resulting from the addition of HIV or sexual and reproductive health activities.

New sources of funding for health systems strengthening and support to sector-wide management processes represent major opportunities for developing comprehensive health sector responses to HIV as part of universal access commitments. Sector strategies can strengthen strategic and operational linkages between programmes and can improve coordination of health and HIV policies, human resources, procurement, supplies and infrastructure development in certain contexts.

Additionally, evidence is emerging about how HIV funds can strengthen health systems, which may influence the delivery of integrated services in the longer term. For example, in Ghana, HIV financing has enabled the Ministry of Health to allocate non-earmarked funds to increase staff and salaries of all health-care workers.[23] In Ethiopia, disease-targeted funding has contributed to the production of a new mid-level cadre of health workers that provides not only HIV services but other services, such as maternal and child health, and has been integrated into the civil service.[24]

Box 4. **Health system weaknesses constrain scale-up**

In Zambia, constraints to scaling-up prevention of mother-to-child transmission within maternal/child health services include shortages of staff, the need for regular in-service training at district level due to rapid staff turnover, and inadequate infrastructure in rural areas. Prevention of mother-to-child transmission and follow-up services are adversely affected by weak logistics in Malawi, where health workers report stock-outs of HIV test kits, nevirapine tablets and syrup and septrin.[22]

Conclusion

Renewed international commitment, increased financing for health systems strengthening and shifts in priorities of major funding organizations have the potential to strengthen linkages between sexual and reproductive health and HIV but it is still too early to assess the impact of these developments. Maximizing opportunities and addressing constraints require concerted action by donors, policy-makers and programme managers to: (i) promote a consensus and common understanding of these linkages; (ii) develop clear technical and operational guidelines on appropriate and cost-effective approaches to integrated programming in different contexts; (iii) accelerate dialogue and joint collaboration on policy, planning and implementation between actors including international donors and national bodies; (iv) ensure adequate resources for integrated service delivery within global funding mechanisms, national HIV strategic plans and health sector plans; and (v) continue to strengthen the evidence base, focusing on factors that promote linkages. ■

Funding: The HLSP Institute, London, England.

Competing interests: None declared.

Résumé

Progrès dans le développement de services intégrant à la fois la santé sexuelle et génésique et le VIH/sida

Le présent article examine les faits nouveaux allant dans le sens d'un renforcement des liens entre santé sexuelle et génésique et VIH/sida et étudie les facteurs qui continuent de s'opposer à ces progrès. Il s'appuie sur une revue réalisée antérieurement en 2006 par le Ministère britannique du développement international, qui examinait les obstacles et les possibilités rencontrés pour étendre ces liens. Nous affirmons que, malgré les preuves de plus en plus nombreuses de la faisabilité et des effets bénéfiques de lier les services de santé sexuelle et génésique à ceux relatifs au VIH/sida, peu de pays ont réalisé un développement conséquent de leur offre de services intégrés. Le manque de concepts terminologiques communs et d'instructions opérationnelles techniques claires, ainsi que la séparation des politiques et des processus institutionnels et financiers pour ces deux domaines continuent de représenter des obstacles importants. Nous avons attiré l'attention sur les leçons tirées de l'expérience avec l'intégration tuberculose/VIH/sida. L'article conclut qu'il existe peu de preuves que des investissements dans les systèmes de santé produisent un renforcement des liens examinés et formule plusieurs recommandations pour exploiter au maximum les opportunités offertes par les faits récents.

Resumen

Progresos de la expansión de los servicios integrados de salud sexual y reproductiva y de VIH

En este artículo se analizan los recientes avances conseguidos con miras a reforzar los vínculos entre la salud sexual y reproductiva y el VIH y se examinan los factores que siguen dificultando los progresos en ese terreno. Se ha tomado como base un análisis anterior llevado a cabo por el Departamento Británico para el Desarrollo Internacional en 2006, en el que se examinaron las limitaciones y las oportunidades para extender masivamente esos vínculos. Sostenemos que, a pesar de la creciente evidencia de que la vinculación de los servicios de salud sexual y reproductiva y de VIH es factible y beneficiosa, son pocos los países que han logrado expandir de forma relevante la prestación integrada de servicios. La falta de una terminología común y de orientaciones operacionales técnicas claras, unida a la separación de los procesos normativos, institucionales y de financiación, siguen siendo obstáculos importantes. Hemos destacado algunas lecciones extraídas de la experiencia adquirida en la integración del control de la tuberculosis y del VIH. Se llega a la conclusión de que hay pocos datos probatorios para determinar si la financiación de los sistemas de salud está fortaleciendo los vínculos, y formulamos varias recomendaciones para aprovechar al máximo las oportunidades que brinda la reciente evolución de la situación.

ملخص

التقدم المحرز في الارتقاء بالخدمات المتكاملة للصحة الجنسية والإنجابية وفيروس الإيدز

تمعن هذا الورقة النظر في التطورات الجديدة الخاصة بتعزيز الصحة الجنسية والإنجابية وارتباطها بفيروس الإيدز، وتناقش العوامل المعوقة للتقدم. وترتكز الورقة على المراجعة السابقة التي أجراها قسم التنمية الدولية البريطاني عام 2006 والتي فحصت العقبات والفرص أمام الارتقاء بهذه الارتباطات. ويناقش الباحثون أنه بالرغم من البيّنات المتزايدة حول سهولة ومزايا الربط بين الصحة الجنسية والإنجابية وبين فيروس الإيدز، إلا أن عدداً قليلاً من البلدان حقق ارتقاء ملموساً في تقديم الخدمة المتكاملة. وإن انعدام الفهم العام للمصطلحات والإرشاد التقني التشغيلي الواضح، والسياسات المنعزلة، والعمليات المؤسساتية والمالية مازالت تمثل عقبات كبيرة. واستقى الباحثون الخبرة من دمج مكافحة السل ومكافحة فيروس الإيدز لإلقاء الضوء على بعض الدروس. وتختم الورقة بأن هناك بيّنات قليلة تحدد ما إذا كان تمويل النظم الصحية يعزز الروابط، ويضع الباحثون عدة توصيّات لتعظيم الفرص التي تقدمها التطورات الحديثة.

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Climate change and family planning: least-developed countries define the agenda

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Abstract The links between rapid population growth and concerns regarding climate change have received little attention. Some commentators have argued that slowing population growth is necessary to reduce further rises in carbon emissions. Others have objected that this would give rise to dehumanizing "population control" programmes in developing countries. Yet the perspective of the developing countries that will be worst affected by climate change has been almost completely ignored by the scientific literature.

This deficit is addressed by this paper, which analyses the first 40 National Adaptation Programmes of Action reports submitted by governments of least-developed countries to the Global Environment Facility for funding. Of these documents, 93% identified at least one of three ways in which demographic trends interact with the effects of climate change: (i) faster degradation of the sources of natural resources; (ii) increased demand for scarce resources; and (iii) heightened human vulnerability to extreme weather events.

These findings suggest that voluntary access to family planning services should be made more available to poor communities in least-developed countries. We stress the distinction between this approach, which prioritizes the welfare of poor communities affected by climate change, and the argument that population growth should be slowed to limit increases in global carbon emissions.

The paper concludes by calling for increased support for rights-based family planning services, including those integrated with HIV/AIDS services, as an important complementary measure to climate change adaptation programmes in developing countries.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* **الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.**

Introduction

Despite widespread general debate on climate change, the relevance of demographic trends remains a comparatively unexplored issue, especially at the policy-making level. Some notable commentators have proved the exception.[1–3] In essence, the concern they raise is that growth of global population – projected to rise from around 6.8 billion people today to 9.2 billion by 2050[4] – will inevitably lead to a significant increase of greenhouse gas emissions. This has led to calls for universal access to voluntary family planning services to be included as one component of the range of policy responses to climate change. Indeed, some authors have pointed to the "win/win" nature of this intervention given the numerous ancillary benefits of rights-based family planning programmes. These include reducing maternal and infant deaths; women's empowerment; preventing unintended pregnancies including among women living with HIV; preventing mother-to-child transmission of HIV; improving access to condoms; lowering the incidence of sexually transmitted infections including those which facilitate HIV transmission; and poverty reduction.[5]

Nevertheless these calls have not to date achieved traction among politicians nor even within the environmental lobby. It is possible that this is due to concern for an over-reaction in the policy response, mindful as many are of the "population control" policies of the 1960s and 1970s that, inspired by concern for global overpopulation, infamously led to some reports of sterilization procedures being applied without full consent of the patient.[6]

It is worth noting that, like much of the public debate on climate change, the links made with demographic trends have been largely confined to their implications for greenhouse gas emissions. The relevance of demographic trends to adaptation to climate change has meanwhile remained almost entirely unexplored by the scientific literature. The main finding of this paper is that this deficit is in stark contrast to the concerns of the governments of least-developed countries.

Despite the high-profile concern for the reduction of greenhouse gas emissions, least-developed countries have focused more predominantly upon adaptation to climate change and thereby how they may limit the predicted damage of climate change.[7] A literature review by two of this paper's authors found that a large majority (93%) of the 40 least-developed countries who had submitted strategy documents to the Global Environmental Facility identified concern about the impact of rapid population growth upon their ability to adapt to climate change.

This re-emergence of concern for demographic trends in least-developed countries[8–10] is striking because concern about "overpopulation" was led by high-income countries in the first decades after the Second World War. In addition, this re-emergence is being driven at least as much by a grassroots movement as by leadership from the governments of either low- or high-income countries or global organizations such as The World Bank. This is illustrated by the case study of an

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(*Submitted: 19 December 2008 – Revised version received: 28 August 2009 – Accepted: 31 August 2009 – Published online: 18 September 2009*)

Ethiopian project that has integrated family planning into a conservation and land management programme. Importantly, it suggests that voluntary family planning services should be made more available to poor communities in least-developed countries to assist their ability to adapt to the harmful effects of climate change. We stress the distinction between this approach and arguing that population growth should be slowed in these countries to curb increases in greenhouse gas emissions. It is perhaps more conducive to a rights-based approach to implement family planning programmes in response to the welfare needs of people and communities rather than in response to international concern for global overpopulation.

Table 1. **Extent and frequency of reference to rapid population growth among the 40 National Adaptation Programmes of Action reports**

Rapid population growth	Number of countries (*n* = 40)	Countries
Not mentioned	3	Eritrea, Liberia, Sao Tome and Principe
Identified as pertinent to at least one specific consequence of climate change	37	Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cape Verde, Central African Republic, Comoros, Democratic Republic of the Congo, Djibouti, Ethiopia, Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lesotho, Madagascar, Malawi, Maldives, Mali, Mauritania, Mozambique, Niger, Rwanda, Samoa, Senegal, Sierra Leone, Solomon Islands, Sudan, Tuvalu, Uganda, United Republic of Tanzania, Vanuatu, Yemen, Zambia
Identified as a main priority	6	Ethiopia, Gambia, Kiribati, Malawi, Samoa, Uganda

National Adaptation Programmes of Action

The United Nations Framework Convention on Climate Change was established on 21 March 1994 with two chief objectives. The first was to reduce greenhouse gas emissions including carbon dioxide. This is currently being implemented through the Kyoto Protocol and is by far the most recognized component of the Framework Convention. Second, member states of the Organisation for Economic Co-operation and Development (OECD) have also committed to provide financial support – over and above existing aid flows – to developing countries that require assistance to adapt to the impact of climate change. This financial support is delivered through the Global Environmental Facility.

Between 2004 and April 2009, the first 40 governments submitted their National Adaptation Programmes of Action (NAPA) in response to a commission by the Global Environmental Facility.[11] These reports represent a significant step towards realizing the OECD pledge of support by providing a recognized process by which least-developed countries and small island developing states can identify and articulate their priorities for climate change adaptation. The NAPAs set out the proposed adaptation strategies that are eligible for funding from the Least Developed Countries Fund administered by the Global Environmental Facility. At the time of writing, US$ 172 million had been dispersed through this fund, with aims to reach US$ 500 million before 2012.

The NAPA reports are distinctive in that they were created by governments of least-developed countries in a consultative way with civil society and local groups and they avoid a "top-down" rationale;[12] that is, they avoid a one-way flow of information between donor and recipient, a relationship that characterizes and flaws much development assistance. Analysis of the reports shows that, in addition to concerns regarding the impact of changing weather conditions on factors such as vulnerability to flood, drought and decreased crop yield, 37 of the reports (93%) were found to cite "rapid population growth" as a factor that compounds these problems.

Many common themes emerge regarding specific climate change effects. Almost all (38 of 40 countries) identify the risk of increased flooding, while 36 identify longer or more frequent periods of drought. Thirty three identify reduced crop yield, 35 fresh water scarcity and 37 discuss threats to biodiversity. For the purpose of this paper however, we highlight the fact that 37 reports identify rapid population growth as a problem that either exacerbates the effects of climate change or impedes the ability to adapt. Six of these identified rapid population growth as a priority issue to be addressed by the NAPA strategy while only three of the 40 reports did not mention population growth at all. Table 1 summarizes these findings.

The harmful consequences of climate change identified by the 40 countries are many, though they vary between countries and regions and also depend on the timescale involved. For example, in Bangladesh, increased flooding due to storms and rises in sea level are of concern, while in large parts of sub-Saharan Africa there are more concerns about a decline in agricultural production.[13,14] Water insecurity is another common anxiety. As illustrated in Table 1, 37 of the reports cited rapid population growth as a detrimental factor affecting one or more of these harmful consequences. Table 2 identifies the different climate change adaptation issues that are identified as exacerbated by rapid population growth.

Demographic and climatic interplay

Given the speed of demographic change in many least-developed countries, it is perhaps no surprise that population growth is identified as problematic in strategies concerned with natural resource depletion. For example, the populations of Rwanda and Uganda are, respectively, projected to roughly double and triple by the year 2050.[4,15] Modern contraceptive prevalence remains low in both countries; in Uganda it is 18% and in Rwanda 10%.[16] But these reports go beyond simply citing this problem and offer a rich description of the interplay between the consequences of both demographic and climate change.

Food insecurity is a major and recurring theme. Coastal and small island states often highlight the impact of climate change and rapid population growth upon deteriorating fishing stocks, while other nations are more concerned by the combined impact of climate change and rapid population growth upon crop yields, illustrated here by Vanuatu:

"With the increasing population, the fallow periods are being shortened, adding to the soil degradation. Climate variability and extreme events such as droughts and floods will exacerbate the impact on the land, and in turn on the agricultural productivity."[17]

In addition to the fear of worsening food insecurity, natural resource depletion is a central theme of all the reports. While some point to the loss of such resources consequent to environmental change and extreme weather events, others outline population growth as an additional stressor. The consequences of these combined stressors are often defined both in economic terms and as increased human vulnerability to the impact of climate change, as is the case in Uganda regarding its natural forest depletion:

"Deforestation is caused by a number of factors, including population increase and poor agricultural practices... This high rate of deforestation and forest degradation suggests that if nothing is done, Uganda may lose her natural forests by the end of this century. This will be very expensive because the consequences of deforestation are many; and include: desertification, loss of biodiversity, erosion of gene pools, increased vulnerability of local communities to climate extremes, and reduction of livelihood assets for rural communities."[18]

The Rwandan report links the same issue of heightened vulnerability with a second major demographic concern relating to climate change, that of migration.[19] Here the focus is upon the additional burden that climate change places upon communities already facing migratory challenges caused in part by rapid population growth:

"High density population zones are currently characterised by overexploitation of lands and a vegetal cover severely altered. Erosion and landslide processes are advanced. This situation explains the present migratory dynamic of people from the most densely populated provinces in the North (Ruhengeri, Gisenyi, Byumba) and the South (Butare, Gitarama) towards the least populated provinces especially in the East (Umutara, Kibungo) and South East (Kigali Ngali) in search of a new land for agriculture and livestock. These migrating populations are already economically vulnerable and this vulnerability is increased by the high risk of drought and desertification of the zone that receives them."[19]

This increased incidence of drought is echoed in many other countries' reports. Fresh water shortage is clearly a critical concern of many countries and is often linked in the reports to rapid population growth. Here the issue is usually one of diminishing supply (due to climate change) in the face of increasing demand (due to population growth) although some reports also point to the effects of rising pollution levels upon fresh water. Bangladesh highlights the twin effects of rising sea levels and population growth on the relative availability of fresh water:

"The effect of saline water intrusion in the estuaries and into the groundwater would be enhanced by low river flow, sea level rise and subsidence. Pressure of the growing population and rising demand due to economic development will further reduce relative availability of fresh water supply in future. The adverse effects of saline water intrusion will be significant on coastal agriculture and the availability of fresh water for public and industrial water supply will fall."[20]

Other NAPA reports (the Gambia and Solomon Islands) link the issues of limited fresh water availability and high population density to increased spread of infectious disease:

"…the risk of infectious disease transmission increases with overcrowding."[21]

While the concerns of the different NAPA reports regarding rapid population growth and climate change are diverse, three key themes emerge: (i) reducing supply – rapid population growth and climate change act cumulatively to degrade the source of key natural resources, for example through soil erosion and deforestation; (ii) increasing demand – rapid population growth is projected to escalate the demand for resources that are diminished by climate change, including fresh water and food; and (iii) vulnerability to natural disaster – rapid population growth heightens human vulnerability to natural disasters caused by climate change, such as by forcing more people to migrate and settle in areas at risk of floods, storms, drought and infectious disease.

Table 2. **Ten most-cited issues identified as linked to population growth by 37 National Adaptation Programmes of Action reports**

Population/adaptation issue	National Adaptation Programmes of Action Reports (*n* = 37)
Soil degradation/erosion	21
Fresh water scarcity	18
Migration	18
Deforestation	17
Inadequate farm land per capita	14
Loss of biodiversity	11
Disease and health system constraints	8
Loss of natural habitat	8
Diminishing fish stocks	7
Desertification	5

An integrated approach

While many (37) of the NAPA reports identify rapid population growth as important to our understanding of the impact of climate change, few (6) propose to address population growth directly

through the adaptation strategies they outline. This is perhaps unsurprising given the fact that ministries for the environment were responsible for authoring the NAPAs while "population" is traditionally an issue for the ministry of health. It is also an unfortunate reflection of the fact that, for most countries, family planning remains within its reproductive health sector "silo" and has yet to be addressed on a large scale with the multisector approach it both merits and requires. But the fact that so many ministries for the environment did mention rapid population growth suggests a potential to weaken these "silos".

Government response notwithstanding, some civil society organizations concerned with the impact of climatic trends upon human welfare have taken the lead in implementing the integration of sexual and reproductive health into environmental adaptation efforts. This trend both echoes calls to integrate reproductive health services into HIV/AIDS programmes and also points to a need for even wider multisector integration. An example of such a multisector approach is offered by the Watershed Management Project of the Ethio Wetlands and Natural Resources Association and the Consortium for the Integration of Population, Health and Environment Network in Ethiopia, the aims of which support specific objectives identified in the Ethiopian NAPA, which is explicit on the need to mainstream family planning into the agricultural sector.[22]

The Watershed Management Project in Wichi province of Metu Woreda in eastern Ethiopia ran between 2005 and 2007.[23] Its aim was to sustainably improve crop production and to minimize biodiversity loss in a region containing almost 3000 rural households. The region had been severely affected by increasingly dry weather conditions, forcing inhabitants to cut back natural forest for agricultural purposes, in turn responsible for extreme soil erosion.

The project had three implementation strands: (i) to train inhabitants and local organizations in sustainable land-management practices and "healthy ecosystem awareness", including agroforestry, hand-pump irrigation, compost preparation and environmental impact assessment; (ii) to rehabilitate uplands and wetlands through reforestation; and (iii) the project included promotion of modern family planning methods and HIV/AIDS awareness by inviting professionals from local heath facilities to participate in the environmental training sessions. This inclusion was based both upon the analysis that rapid population growth was in part responsible for local deforestation, and also to further the overriding project goal of improving health and welfare.

Four years from project inception, the Wichi province Watershed Management Project has achieved results that are immediately apparent to visitors to the area. Improved irrigation, compost and tree-planting methods have reversed soil degradation trends and improved local nutritional levels, hence reducing the need for cutting back the forest. Furthermore, by integrating family planning and HIV/AIDS awareness, the project has helped to ensure that these environmental benefits are sustainable, protected from being eroded by rapid population growth and complemented by improved sexual and reproductive health.

Conclusion

The NAPA reports, in their repeated emphasis of the relevance of demographic trends, provide a strong collective case for the "mainstreaming" of an integrated approach to adaptation efforts that is exemplified by the Ethiopian case study. The Kiribati report puts it succinctly:

"Population size and growth rates… have significant impacts on the state of the environment, aggravating vulnerability and adaptation needs. In this respect, population policy is an important consideration of adaptation strategies."[24]

At the national level, incorporating this demographic perspective will require the integration of voluntary, rights-based family planning programmes into adaptation efforts, hence making climate change a priority that must be shared by departments of health as well as environmental ministries.

At the international level, rectifying the chronic global under-spend for family planning development assistance – including through integrated sexual and reproductive health and HIV/AIDS programmes – should be recognized as an important addition to international efforts to assist least-developed countries to adapt to climate change. ■

Competing interests: None declared.

Résumé

Changement climatique et planification familiale : les pays les moins développés définissent l'ordre du jour

Les liens entre croissance démographique rapide et changement climatique ont bénéficié de peu d'attention. Certains ont avancé qu'un ralentissement de la croissance démographique était nécessaire pour limiter davantage l'envolée des émissions de carbone. D'autres ont objecté que cela supposerait la mise en place de programmes de «contrôle démographique» déshumanisants dans les pays en développement. Néanmoins, la perspective que ces pays soient les plus gravement affectés par le changement climatique a été presque totalement ignorée par la littérature scientifique.

Le présent article tente de combler ces lacunes en analysant les 40 premiers rapports des Programmes d'action nationaux d'adaptation soumis pour financement au Fonds pour l'environnement mondial par les gouvernements des pays les moins développés. Parmi ces documents, 93 % mettaient en évidence au moins un des trois modes d'interaction suivants entre les tendances démographiques et les effets du changement climatique : (i) accélération de l'épuisement des sources de ressources naturelles, (ii) accroissement de la demande en ressources rares et (iii) accentuation de la vulnérabilité humaine aux événements climatiques extrêmes.

Ces résultats laissent à penser que l'accès volontaire aux services de planification familiale devrait être facilité pour les communautés pauvres des pays les moins développés. Nous insistons sur la distinction entre cette approche, qui donne la priorité au bien être des communautés pauvres affectées par le

changement climatique, et l'argumentaire selon lequel il faudrait ralentir la croissance démographique pour limiter l'augmentation des émissions mondiales de carbone.

L'article conclut en appelant à soutenir davantage les services de planification familiale respectueux des droits des populations, et notamment ceux intégrant des services liés au VIH/sida, en tant que mesure complémentaire des programmes d'adaptation au changement climatique dans les pays en développement.

Resumen

Cambio climático y planificación familiar: los países menos adelantados marcan la agenda

No se ha prestado demasiada atención a la relación existente entre el rápido crecimiento de la población y la preocupación que suscita el cambio climático. Algunos comentaristas han señalado que la disminución del crecimiento demográfico es un requisito necesario para reducir el incremento de las emisiones de carbono en el futuro. Otros han objetado sin embargo que eso puede dar lugar a programas de crudo «control demográfico» en los países en desarrollo. Sin embargo, las publicaciones científicas han ignorado casi por completo la perspectiva de los países en desarrollo que más gravemente se verán afectados por el cambio climático.

Colmar esa laguna es el objetivo del presente artículo, que analiza los primeros 40 informes de Programas Nacionales de Acción para la Adaptación presentados al Fondo para el Medio Ambiente Mundial por gobiernos de los países menos adelantados para solicitar financiación. El 93% de esos documentos identificaban al menos una de tres posibles formas de interacción entre las tendencias demográficas y los efectos del cambio climático: (i) un más rápido deterioro de las fuentes de recursos naturales, (ii) la mayor demanda de unos recursos escasos y (iii) el aumento de la vulnerabilidad humana a fenómenos meteorológicos extremos.

Estos resultados indican que habría que ofrecer más posibilidades de acceso voluntario a los servicios de planificación familiar a las comunidades pobres de los países menos adelantados. Destacamos la diferencia existente entre este enfoque, que prioriza el bienestar de las comunidades pobres afectadas por el cambio climático, y la postura de proponer que se reduzca el crecimiento de la población a fin de limitar el aumento de las emisiones de carbono mundiales.

El artículo finaliza solicitando un mayor apoyo a los servicios de planificación familiar basados en los derechos, en particular a los integrados con los servicios contra el VIH/sida, como una medida complementaria importante de los programas de adaptación al cambio climático en los países en desarrollo.

ملخص

التغير المناخي وتنظيم الأسرة: البلدان الأقل تطوُّراً تحدد برنامج العمل

لم يحظ الارتباط بين النمو السريع للسكان وبين الشواغل المتعلقة بالتغير المناخي باهتمام كبير. ويناقش بعض المعلقين أن إبطاء النمو السكاني ضروري للإقلال من الازدياد في انبعاثات الكربون. فيما يعارض آخرون بأن ذلك سيؤدي إلى انتهاك الإنسانية في برامج تنظيم السكان في البلدان النامية. ومع ذلك فقد تجاهلت النشريات العلمية وجهة نظر البلدان النامية التي ستتأثر اسوأ تأثير بالتغير المناخي تجاهلاً كاملاً تقريباً.

وتعالج هذه الورقة هذه العيوب، فتحلل التقارير الأربعين الأولى لبرامج العمل للتكييف الوطني، والتي قدمتها الحكومات في البلدان الأقل تطوراً إلى المرفق العالمي للبيئة للحصول على التمويل. ومن بين هذه التقارير، تم التعرف في 93% على الأقل منها على واحدة من ثلاث طرق تتفاعل فيها الاتجاهات الديموغرافية مع تأثيرات التغير المناخي، وهذه الطرق هي: (1) تهالك سريع في مصادر الموارد الطبيعية؛ (2) ازدياد الطلب على الموارد الشحيحة؛ (3) ازدياد تعرُّض البشر للأحداث المناخية البالغة الشدة.

وتشير هذه الموجودات أن الوصول الطوعي لخدمات تنظيم الأسرة ينبغي أن يكون متاحاً أكثر للمجتمعات الفقيرة في البلدان الأقل تطوراً. ويؤكد الباحثون على التفريق بين هذا الأسلوب الذي يعطي الأولوية لرفاهية المجتمعات الفقيرة المتأثرة بالتغير المناخي، وبين الاحتجاج بأن النمو السكاني ينبغي أن يبطأ للحد من الازدياد في الانبعاثات الكربونية.

وتخلص الورقة بالدعوة إلى زيادة الدعم لخدمات تنظيم الأسرة المرتكزة على الحقوق والتي تشمل الخدمات المتكاملة مع خدمات الإيدز والعدوى بفيروسه، كإجراء تكميلي هام لبرامج التكيف مع التغير المناخي في البلدان النامية.

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Control of sexually transmitted infections and prevention of HIV transmission: mending a fractured paradigm

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Abstract Control of sexually transmitted infections (STIs) is feasible, leads to improved sexual and reproductive health and contributes to preventing HIV transmission. The most advanced HIV epidemics have developed under conditions of poor STI control, particularly where ulcerative STIs were prevalent. Several countries that have successfully controlled STIs have documented stabilization or reversal of their HIV epidemics.

STI control is a public health outcome measured by reduced incidence and prevalence. The means to achieve this include: (i) targeting and outreach to populations at greatest risk; (ii) promoting and providing condoms and other means of prevention; (iii) effective clinical interventions; (iv) an enabling environment; and (v) reliable data.

Clinical services include STI case management, screening and management of STIs in sex partners. Syndromic case management is effective for most symptomatic curable STIs and screening strategies exist to detect some asymptomatic infections. Presumptive epidemiologic treatment of sex partners and sex workers complement efforts to interrupt transmission and reduce prevalence. Clinical services alone are insufficient for control since many people with STIs do not attend clinics. Outreach and peer education have been effectively used to reach such populations.

STI control requires effective interventions with core populations whose rates of partner change are high enough to sustain transmission. Effective, appropriate targeting is thus necessary and often sufficient to reduce prevalence in the general population. Such efforts are most effective when combined with structural interventions to ensure an enabling environment for prevention. Reliable surveillance and related data are critical for designing and evaluating interventions and for assessing control efforts.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

In the history of sexually transmitted infection (STI) control, as with other communicable diseases, the pendulum swings between vertical disease-specific and broader horizontal approaches, from a narrow focus on pathogens and their treatment to the wider needs of populations who host and transmit them.

Since the emergence of HIV in the 1980s, STI control efforts have increasingly been defined in relation to HIV programme priorities.[1] Although HIV is itself an STI, efforts to prevent its transmission are largely managed through programmes that are funded, implemented and evaluated independently of other STI control efforts. Such a fractured paradigm has had unfortunate consequences. Too often, neglected STI programmes – the foundation upon which HIV prevention efforts were built – collapse due to reduced funding. As a result, STI clinics and services are understaffed, understocked or disappearing altogether; pregnant women may be offered HIV tests but are no longer screened for syphilis; and STI reporting, an important marker of sexual transmission trends, has largely collapsed.[2,3]

In other areas of communicable disease control, the pendulum is moving in a different direction towards strategies that aim for broad public health benefit while pursuing disease-specific control objectives. Examples include attention to general lung health within the Stop TB partnership and integrated vector management in malaria efforts. The rationale is that sustainable disease control requires coordinated efforts to address common conditions that may facilitate transmission or impede access to prevention, case detection, diagnosis and treatment.[4,5]

This paper describes a unified paradigm of STI control where HIV is an important focus. The approach is analytical and programme-oriented, with attention to public health outcomes and means. We start by reviewing definitions and outlining basic components of STI control, and then examine empirical evidence of the feasibility and benefits of STI control under different conditions. We also consider what happens to HIV under different scenarios and look at the overlap and potential synergies between HIV prevention and STI control efforts.

Defining STI control

STI control is a public health outcome, measured as reduced incidence and prevalence, achieved by implementing strategies composed of multiple synergistic interventions. In the literature, the term "STI control" is frequently used interchangeably with "STI treatment", yet these are quite different things.[6,7] Control of any communicable disease is a public health outcome, measured as reduced prevalence (total

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(*Submitted: 9 January 2009 – Revised version received: 22 August 2009 – Accepted: 31 August 2009*)

infections) or incidence (new infections) in a population. Treatment is a biomedical intervention that, unless part of a broader control strategy, usually does not result in lower transmission rates or disease burden.

STI control can be measured in absolute or relative terms, for example, as elimination of chancroid or 50% reduction of the prevalence of gonorrhoea. Monitoring trends of common curable STIs, etiologically or syndromically, can provide evidence of changing incidence. Where STI surveillance is supported and functioning (often it is not), these data also reflect general sexual transmission trends and can be used to assess the adequacy of overall STI/HIV prevention efforts.[8] Since HIV shares many aspects with other STIs – including modes of transmission, behavioural and other cofactors and potential control measures – HIV prevention can logically be situated within the larger, encompassing domain of STI control.

Back to basics

A comprehensive STI control strategy includes targeted community-based interventions, promotion and provision of the means of prevention and effective clinical services within an enabling environment, as well as reliable data to guide the response.

The science and methods of STI control build on several centuries' experience backed by evidence of progressively declining incidence and prevalence, particularly in developed countries.[9] Over the past three decades, these methods have been adapted and are proving valid in some less-developed countries with limited resources. They have also been adapted to better address chronic viral STIs such as herpes simplex virus type 2 and HIV. In many countries, however, such proven control methods have not been implemented consistently or at sufficient scale to have public health impact.

The effectiveness of standard STI control interventions and strategies – from condom promotion to epidemiologic targeting and partner treatment – is supported by extensive empirical evidence. Despite limited data from randomized controlled trials, most have been adapted to form the basis for HIV prevention work. Recent calls for "combination HIV prevention" and "back to basics" approaches to HIV emphasize the use of combinations of feasible and proven interventions.[10,11]

A recent review listed priority STI control interventions to include "STI treatment of high-risk sub-populations, comprehensive case management of symptomatic STIs, antenatal syphilis screening and treatment and ophthalmia neonatorum prophylaxis, condom promotion and risk reduction counselling" with increased emphasis on the role of STI clinics in identifying and counselling HIV-infected persons and in diagnosing and managing their STIs.[12] The review pragmatically provides evidence for the effectiveness of individual intervention components within the fragmented domains of STI control and HIV prevention, while making a case for better alignment of efforts.

What would such aligned control efforts include? Historical experience argues for coordinated effort in five main areas: (i) appropriate epidemiologic targeting; (ii) primary prevention and access to means of prevention; (iii) provision of effective clinical services to shorten the duration of infectivity; (iv) an "enabling environment" for prevention; and (v) reliable data to guide decision-making.

Clinical services

Clinical interventions can be broadly categorized as STI management approaches for symptomatic patients, screening for asymptomatic infections and partner strategies. All should be supported by appropriate efforts to educate, counsel and provide the means, such as condoms, to prevent infection.

STI case management aims to provide rapid and effective treatment to patients presenting with symptoms to break the chain of infection. Shortening the duration of infectivity is an important objective in the control of STI epidemics. There is strong evidence that syndromic case management is an effective approach for patients with urethral discharge and genital ulcers. It has advantages over previous approaches (i.e. etiologic and clinical diagnosis) in most service delivery settings.[12,13] Syndromic case management also performs well for common vaginal infections although it is not designed to detect asymptomatic cervical infections. STI screening and case finding are time-tested approaches for identifying asymptomatic infections. Although feasible, screening to detect cervical infection remains problematic since sensitive tests for detecting gonorrhoea and chlamydial infection remain too expensive for widespread use.

Breaking the chain of infection also involves treating as many sexual partners of people with STIs as can be identified. Several partner treatment strategies have been described with success rates as high as 30–50% (of index patients).[14] Due to frequent uncertainty about STI diagnoses in women and potentially serious social consequences of notification, partner strategies should focus on identifying symptomatic men who should then be offered counselling and assistance with notifying their partners.

Other interventions aim to interrupt transmission through epidemiologic targeting and presumptive treatment. Asking STI patients about the location of recent contacts can help direct prevention efforts to epidemiologically important "hot-spots" where incidence may be high. Presumptive treatment has been used to rapidly reduce STI prevalence among populations at highest risk, such as sex workers.[15]

A relatively new area for STI clinical services is identification and early intervention with people living with HIV, particularly those recently infected. Promising interventions include early HIV testing and counselling of STI patients, detection of acute HIV infection and regular STI screening and treatment to reduce genital viral load.[16] It is important that clinical interventions be seen as an extension of prevention work in the community and, as such, reinforce prevention messages and promote condoms.

Primary prevention

STI control cannot be achieved by means of clinical interventions alone. Primary prevention interventions at the clinic and outside, where transmission takes place, are required. Such interventions emphasize the means of prevention, information and referrals to clinical services.[11,17] There is strong evidence that male latex condoms reduce transmission of HIV by at least 80–85%, are effective against most other STIs and reduce the

risk of unintended pregnancy.[18] Other barrier methods, such as the female condom, may have advantages over the male condom in some situations, or as backup methods.[19,20]

From the perspective of the STI control programme, the challenge is to make condoms and other means of prevention available and affordable, promote their use and reduce barriers to utilization. Social marketing has proven effective in increasing supply and demand.[21] Maximizing the public health benefit of the condom component of the programme is not simply a question of promotion and distribution in the community at large, however. What matters most is that condoms are used in situations where STIs are most likely to spread.[22]

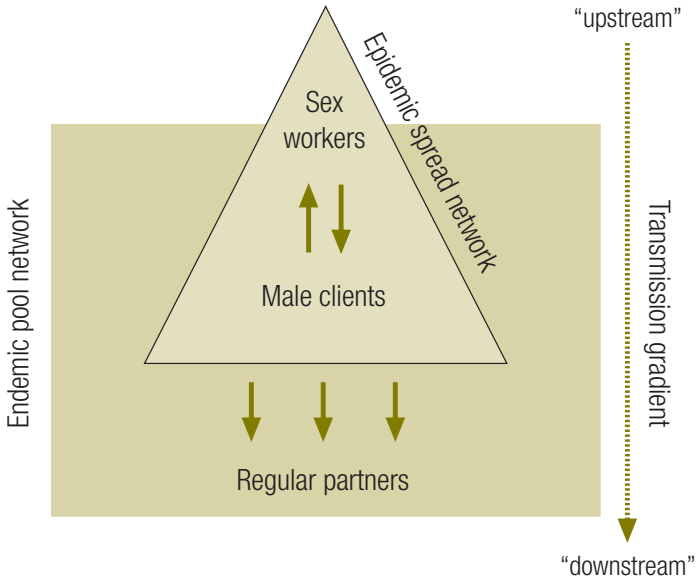
There is some evidence that other behavioural interventions can be synergistic to targeted condom promotion. In Thailand, explicit messages to men about the risks of STIs from unprotected commercial sex resulted in higher reported condom use, lower reported numbers of sex worker visits and lower infection rates.[22] Behaviour change in the general population, such as delaying sexual debut, may also serve to reduce transmission but there is little evidence to support abstinence or monogamy as stand-alone strategies.

Targeting high-risk populations

Primary prevention and clinical services contribute synergistically to STI control. The success of these efforts depends not on reaching all people but on reaching the right people with effective interventions. If there is a fundamental tenet of STI control, it is that transmission depends on high rates of sexual partner change. Epidemics are sustained "upstream" in relatively small sub-groups of the population where rates of sexual partner change are sufficient to sustain high incidence (Fig. 1). Secondary or "downstream" transmission accounts for infections among people at lower risk. An important corollary is that prevention efforts that effectively reduce transmission in the high-partner "core" population are necessary, and often sufficient, to reduce transmission in the population at large.

This principle is implemented through appropriate targeting of STI control interventions. In Asia, for example, STI control programmes increasingly aim for "saturation coverage" of high-risk populations of sex workers, men who have sex with men, and persons injecting drugs. Other interventions target bridge populations – such as clients and partners of high-risk individuals – through STI clinics or workplace interventions.

Fig. 1. **Dynamics of STI and HIV transmission**



STI, sexually transmitted infection.

Targeting generally builds on two methods – outreach and peer interventions. Programmes begin with mapping to locate and estimate sizes of target populations.[23] Contacts made during this formative stage provide the initial building blocks for peer-based interventions. Peer workers have been shown to be most effective in catalysing change in their communities, from condom use to clinic attendance to structural changes.[24]

Related and important concepts are structural interventions and creating an enabling environment. Structural interventions address root causes of problems, such as the difficulties of individual sex workers to negotiate condom use. By shifting responsibility from the individual to the establishment – in this case by requiring sex work establishments to enforce 100% condom use – better compliance can be achieved and monitored.[22] Other examples of structural interventions include collective action by sex workers to change social conditions that put them at risk.[25]

Such efforts aim to create an enabling environment for prevention. STIs spread most easily among marginalized populations that live with daily risk, have little power to negotiate safer conditions and have poor access to health services. Recent successful examples of STI control have integrated basic prevention components – targeted provision of condoms and STI services – into broader community-based efforts for enabling structural change.[26]

Measuring STI control

STIs are reliable markers of HIV transmission that should be monitored to assess effectiveness of combined prevention efforts. Feasible methods, based on case reporting and periodic surveys, can identify areas where STI control is poor and provide outcome data needed to monitor programme performance. Surveillance should be based on routine STI case reporting, supplemented with special surveys of STI and HIV prevalence, assessment of STI syndrome etiologies, antimicrobial resistance monitoring and risk behaviour prevalence. It is also important to monitor coverage of STI services, particularly for priority population groups.

STI surveillance is a recommended component of second-generation HIV

Table 1. **Epidemiologic parameters for control of STIs including HIV**

	Focus	Methods	Notes
Who?	High coverage of "core" populations of sex workers and men who have sex with men is the first priority. Drug users, also often at high risk through sexual transmission, should also be targeted.	Targeted interventions linked to outreach and clinical services. Several countries have committed to scaling-up targeted interventions to reach saturation coverage of these populations.[39,40]	Targeting is highly efficient. Population-level impact is feasible with interventions directed to core populations who generally comprise less than 5% of the sexually active population.
	Male bridge populations. Efforts should also be made to reach actual or likely clients of sex workers and other bridge populations who disseminate STIs from core networks to the general population.	STI clinic patients are men with recent exposure. Workplace interventions particularly in settings of migrant labour or mobility. Outreach, peer education and STI services in red light districts where transmission potential is high.[40]	Bridge populations may account for 20% or more of the sexually active male population. Interventions likely to reach men at high probability of having STIs and/or acute HIV infection; many report recent sex worker contact.
	STI patients and people living with HIV. A high proportion of STI clinic patients may have acute HIV infection	Provider initiated testing and counselling, STI screening, treatment and counselling for people living with HIV under care.[16,41,42]	Strengthening STI services offers opportunities to treat STIs and offer risk reduction counselling and HIV testing.
What?	Curable ulcerative STIs. Control of curable genital ulcers is highly feasible. Control of these infections correlates well with stabilization of HIV.[43–45]	Effective antibiotic treatment of chancroid and syphilis results in rapid cure. Combined with targeted prevention efforts, control or elimination is feasible.	Data and modelling have established that ulcerative STIs are the most important STI cofactors for HIV transmission.[44]
	Viral ulcerative STIs. HSV-2 being an incurable viral infection requires different control strategies.	Studies have demonstrated the feasibility of suppressing HSV-2 and reducing HSV-2 and HIV concentrations in genital secretions.[46,47]	Ongoing research is exploring optimal regimens for HIV prevention.
	Curable non-ulcerative STIs. Non-ulcerative STIs are prevalent and increase HIV transmission 2–4 times.	Effective antibiotic treatment of gonorrhoea or chlamydial infection reduces HIV viral load to normal levels.[48]	Reductions in gonorrhoea and chlamydial infection have been reported in high and lower risk populations.
Where?	Effective targeting requires a 2-stage process: (i) identifying epidemiologic "hot-spots" where risk is present and/or transmission is believed to be taking place; and (ii) mapping of populations in those areas.	STI surveillance helps identify "hot-spots" in the first stage of mapping. STI case reports from sentinel STI clinics can be used to monitor trends of new male STIs at district levels.	Demonstrated in Thailand and Sri Lanka. Builds on historical experience with contact tracing and STI outbreak control in developed countries.[49,50]
When?	STI control is most effective in preventing HIV transmission: (i) when STIs, particularly ulcers are poorly controlled; and (ii) early in HIV epidemics.	STI surveillance. STI case reports and STI prevalence surveys among high-risk populations can be used to assess impact and monitor trends.	Modelling has shown the potential contribution of STI control to HIV prevention at different phases of STI and HIV epidemics.

HSV-2, herpes simplex virus type 2; STI, sexually transmitted infection.

surveillance. Trends of short-duration STIs are more sensitive indicators of high-risk sexual activity than those based on HIV prevalence and can be monitored widely, even in underserved areas where STI control is often poor. Yet few countries maintain systems to collect and use such data.[27]

Empirical evidence

STI control outcomes

STI control has been shown to be feasible in a wide range of countries at different levels of development. STI trends have been on the decline since the early twentieth century in many developed countries and increasingly in resource-constrained countries. For example, China, Cuba and Sri Lanka documented large reductions of STIs in the 1950s and 1960s. STI control is relative and dynamic, however, and sensitive to social and economic change. STI rates surged in western Europe and North America following introduction of hormonal contraception and in China following economic liberalization.[9,28,29]

More recently, several countries in Asia have documented large reductions in common STIs. Thailand measured a 95% drop in common curable STIs during the 1990s following introduction of the 100% condom use programme implemented by STI clinic staff working with sex work establishments. Chancroid was quickly eliminated, congenital syphilis has become rare and maternal syphilis is stable at about two cases per 1000 pregnant women.[30] Cambodia measured large decreases in both ulcerative and non-ulcerative STIs over five years following a similar intervention.[22,31]

In Africa, STI control efforts have been relatively neglected and STI surveillance is generally inadequate to reliably depict trends. However, several exceptions, where STI control programmes and surveillance have been maintained, provide examples of the feasibility of improving STI control even where resources are limited. Senegal, where sex work is decriminalized and STI services are accessible to sex workers, has reported moderately low and stable STI prevalence.[32,33] In Nairobi, Kenya, targeted interventions with sex workers and improved STI

case management in health centres preceded declines in ulcerative and other STIs and local disappearance of chancroid.[34,35]

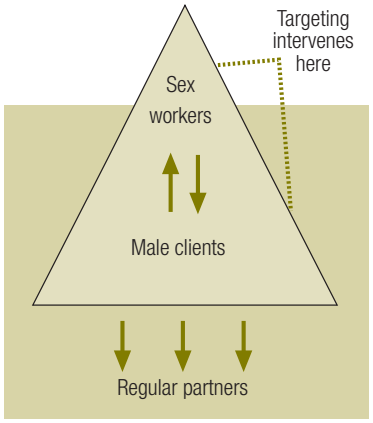
The scale of decline in STI rates in these examples is noteworthy. Declines of 90% or more in incidence of one or more common curable STIs have been documented in China, Kenya (Nairobi), Sri Lanka and Thailand with rapid elimination of chancroid and congenital syphilis in most settings.[28,30,35] In comparison, intervention trials evaluating STI treatment approaches or limited STI control interventions, have reported much lower STI reductions.[36–38]

HIV prevention outcomes

Evidence supporting the role of STIs as HIV cofactors is extensive and indisputable. Reducing STI prevalence removes cofactors, making HIV transmission less efficient. Countries with poor STI control have been most vulnerable to HIV epidemics, while improvements in STI control parallel or precede declines in HIV incidence and prevalence. There is growing evidence that countries that control STIs are more likely to halt and reverse their HIV epidemics than those that do not. This observation builds on an extensive body of observational and historical evidence which documented: (i) strong associations between several individual STIs and HIV; and (ii) susceptibility of countries with poor STI control to developing sizable HIV epidemics.[1]

More recently, several countries have reported large changes in STI incidence and/or prevalence. Cambodia, Kenya (data from Nairobi) and Thailand show HIV epidemics stabilizing and reversing in both high-risk and general population groups coincident with or following STI reductions. Sri Lanka had established good STI control before the introduction of HIV and its HIV epidemic has remained low-level for more than two decades. Despite a long-standing civil war and an uncircumcised male population, there is little evidence of transmission within the population and most cases of HIV are found among migrant labourers returning from abroad. The experience of China illustrates how deteriorating STI control since economic liberalization in the 1980s preceded a rapidly increasing HIV epidemic.[28,29]

Fig. 2. **Intervention opportunities for STI and HIV transmission**



Clinical services	STI surveillance data
Targeted intervention clinics	STI prevalence (sex worker syphilis screening)
STI clinics workplace clinics	STI incidence (male STI case reports)
Primary care mother and child health clinics	STI prevalence (antenatal syphilis screening)

STI, sexually transmitted infection.

Implications for programmes

What are the implications for STI control and HIV prevention programmes? If broader STI control is important for HIV prevention, how can this be achieved? What are the conditions where investment in STI control is most likely to contribute to slowing HIV epidemics? Table 1 follows standard epidemiological parameters of disease control to address these questions.

Who?

STI control efforts should focus on core and bridge populations, symptomatic patients and persons living with HIV. High coverage of such key populations as sex workers and men who have sex with men is the first priority.[39,40] Efforts should also be made to reach actual or likely clients of sex workers and other bridge populations who disseminate STIs from core networks to the general population. Clinics providing STI treatment are a good entry point to screen and identify persons living with HIV, and additional effort is required to screen persons living with HIV under care to ensure that any STIs are detected and treated.[16,41,42]

What?

Interventions that reduce STI prevalence will reduce the respective cofactor effect and blunt the efficiency of HIV transmission. Data and modelling have established that ulcerative STIs, particularly chancroid, herpes simplex virus type 2 and syphilis, are the most important STI cofactors for HIV transmission.[43,44] Control of curable genital ulcers – chancroid and syphilis – is highly feasible and correlates well with stabilization of HIV epidemics.[45]

Where?

Identification of high-risk populations generally requires a two-stage process: (i) identification of epidemiologic "hot-spots" where risk is present and/or transmission is believed to be taking place; and (ii) mapping of populations in those areas. The importance of STI surveillance in this first stage of mapping has been demonstrated.[49,50]

When?

Modelling has helped in understanding the potential contribution of STI control to HIV prevention at different phases of STI and HIV epidemics. Two conclusions are apparent, that STI control is most effective in preventing HIV transmission: (i) when STIs, particularly ulcers, are poorly controlled; and (ii) early in HIV epidemics. It thus makes sense to strengthen STI control rapidly when prevalence is found to be high or increasing. However, monitoring STI trends requires reliable surveillance, which is lacking in many countries.

A combination of factors – led by unprotected sex work and ulcerative STIs – create ideal conditions, a "perfect storm", for rapid spread of HIV epidemics. Such conditions are most likely to be found in settings with mobile populations and uncircumcised men. Successful STI control programmes have responded with a combination of interventions, guided by reliable mapping and surveillance, to disrupt those conditions for optimal STI control and HIV prevention outcomes (Fig. 2).

Conclusion

In many countries, basic STI services are in disarray as programme resources are determined by decisions relating to a single disease entity. Such a fractured paradigm is as counterproductive for HIV as it is for other STIs. Major HIV epidemics emerged from and spread rapidly under conditions of poor STI control, and further weakening of STI control may well undermine other HIV prevention efforts. Yet experience of countries as diverse as Cambodia, Kenya, Senegal, Sri Lanka and Thailand demonstrate that wider STI control is feasible and that HIV prevention can be strengthened in doing so. ■

Competing interests: None declared.

Résumé

Lutte contre les infections sexuellement transmissibles et prévention de la transmission du VIH : reconstitution d'un dispositif détérioré

L'endiguement des infections sexuellement transmissibles (IST) est réalisable, permet d'améliorer la santé sexuelle et génésique et contribue à prévenir la transmission du VIH. Les plus fortes progressions de l'épidémie de VIH/sida ont été relevées dans des conditions de maîtrise insuffisante des IST, et notamment dans des situations de prévalence importante des IST ulcérantes. Plusieurs pays ayant réussi à endiguer les IST ont enregistré aussi sur leur territoire une stabilisation de l'épidémie de VIH/sida, voire une inversion de ses tendances.

L'endiguement des IST est un résultat de santé publique, qui se mesure par la réduction de l'incidence et de la prévalence de ces infections. Pour parvenir à ce résultat, il faut notamment : (i) cibler les populations les plus à risque et leur offrir des services de proximité ; (ii) promouvoir l'usage des préservatifs et d'autres moyens de prévention et fournir ces moyens ; (iii) mettre en œuvre des interventions cliniques efficaces ; (iv) créer un environnement favorable ; et (v) disposer de données fiables.

Les services cliniques couvrent la prise en charge des cas d'IST, ainsi que le dépistage des partenaires sexuels et leur prise en charge s'ils sont contaminés. Une prise en charge syndromique est efficace pour la plupart des cas curables et symptomatiques d'IST et il existe des stratégies pour dépister certaines infections asymptomatiques. Le traitement épidémiologique présomptif des partenaires sexuels et des professionnels du sexe complète les efforts pour interrompre la transmission et réduire la prévalence. Néanmoins, les services cliniques ne peuvent à eux seuls endiguer les IST dans la mesure où de nombreuses personnes infectées ne vont pas consulter. L'éducation sanitaire sur le terrain et auprès des personnes ayant le même mode de vie a été employée avec succès pour atteindre ces populations.

L'endiguement des IST nécessite d'intervenir efficacement sur un cœur de cible composé d'individus chez lesquels la fréquence des changements de partenaire est assez élevée pour entretenir la transmission. Un ciblage efficace et approprié est ainsi nécessaire et souvent suffisant pour réduire la prévalence des IST dans la population générale. Ces efforts gagnent en efficacité lorsqu'ils sont combinés à des interventions structurelles pour garantir un environnement favorable à la prévention. Il est essentiel de disposer de données de surveillance et d'informations connexes fiables pour concevoir et jauger les interventions et pour évaluer les efforts de lutte.

Resumen

Control de las infecciones de transmisión sexual y prevención de la transmisión del VIH: reparar la fractura

El control de las infecciones de transmisión sexual (ITS) es una medida factible, que propicia una mejor salud sexual y reproductiva y que ayuda a prevenir la transmisión del VIH. Las epidemias más avanzadas de infección por VIH se han desarrollado en condiciones de bajo control de las ITS, sobre todo en los lugares donde abundan los casos de ITS ulcerativas. Varios países que han conseguido controlar las ITS han documentado la estabilización o incluso reversión de sus epidemias de VIH.

El control de las ITS es un resultado de salud pública medido por la disminución de su incidencia y prevalencia. Entre los medios aplicados para lograr ese control cabe citar: (i) la focalización de las medidas en las poblaciones en mayor riesgo y las actividades de extensión a éstas; (ii) la promoción y el suministro de preservativos y otras formas de prevención; (iii) unas intervenciones clínicas eficaces; (iv) un entorno favorable; y (v) datos fiables.

Los servicios clínicos incluyen el tratamiento de los casos de ITS, y el cribado y tratamiento de las ITS de las parejas. El tratamiento sindrómico de los casos es eficaz en la mayoría de las ITS sintomáticas curables, y existen estrategias de cribado para detectar algunas infecciones asintomáticas. El tratamiento epidemiológico de sospecha de las parejas sexuales y de las profesionales del sexo complementa las actividades de interrupción de la transmisión y reducción de la prevalencia. Los servicios clínicos son insuficientes por sí solos para controlar esas infecciones, pues muchas de las personas afectadas por las ITS no acuden a los consultorios. Para llegar a esas poblaciones se ha recurrido con éxito a la proyección exterior y la educación entre compañeros.

Si se quiere controlar las ITS, se requieren intervenciones eficaces centradas en ese núcleo de personas cuya frecuencia de cambio de pareja es lo bastante elevada para sostener la transmisión. Una focalización adecuada y eficaz es por tanto

necesaria y a menudo suficiente para reducir la prevalencia en la población general. Esos esfuerzos revisten la máxima eficacia cuando se combinan con intervenciones estructurales tendentes a garantizar un entorno favorable para la prevención. Una vigilancia fiable y los datos por ella aportados son elementos fundamentales para diseñar y evaluar las intervenciones, así como para evaluar las medidas de control.

ملخص

مكافحة العدوى المنقولة جنسياً وتوقي العدوى بفيروس الإيدز: إصلاح النموذج المتصدع

إن مكافحة العدوى المنقولة جنسياً ممكنة التحقيق، وتؤدي إلى تحسين الصحة الجنسية والإنجابية، وتساهم في توقّي انتقال العدوى بفيروس الإيدز. وقد وقعت أشد أوبئة فيروس الإيدز سوءاً في الحالات التي ساءت فيها مكافحة العدوى المنقولة جنسياً، ولاسيّما عند انتشار العدوى التقرحية المنقولة جنسياً. ولقد وثقت عديد من البلدان التي نجحت في مكافحة العدوى المنقولة جنسياً ثبات أو تراجع أوبئة فيروس الإيدز لديها.

وتعتبر مكافحة العدوى المنقولة جنسياً نتيجة صحية عمومية من الممكن قياسها من انخفاض معدلات الوقوع والانتشار. وتتضمن طرق تحقيق ذلك: (أ) استهداف الفئات السكانية الأكثر عرضة للخطر والوصول إليها؛ (ب) نشر وتقديم العازل الجنسي وسائر وسائل الوقاية؛ (ج) التدخلات الإكلينيكية الفعالة؛ (د) البيئة المشجعة؛ (هـ) البيانات الموثوق بها.

وتتضمن الخدمات السريرية التدبير العلاجي للمرضى المصابين بالعدوى المنقولة جنسياً، والتحري والتدبير العلاجي للعدوى المنقولة جنسياً بين الشركاء الجنسيين ويكون التدبير العلاجي لحالات المتلازمات فعالاً في أغلب حالات العدوى المنقولة جنسياً ذات الأعراض والممكن شفاؤها. وتوجد استراتيجيات التحري للكشف عن بعض حالات العدوى عديمة الأعراض. ويستكمل العلاج الوبائي المفترض للشركاء الجنسيين والمشتغلين بالجنس الجهود المبذولة لقطع انتقال العدوى والحد من انتشارها. والخدمات الإكلينيكية وحدها غير كافية للمكافحة حيث إن كثيراً من المصابين بالعدوى المنقولة جنسياً لا يراجعون العيادات. وقد استخدمت برامج الإيصال والتوعية بين الأقران بفعالية للوصول إلى هذه الفئات السكانية.

وتتطلب مكافحة العدوى المنقولة جنسياً تدخلات فعالة بين الفئات السكانية الرئيسية التي تتغير فيها معدلات الإصابة بين الشركاء الجنسيين على نحو عالٍ وكافٍ لاستمرار انتقال العدوى. ومن الضروري إذن الاستهداف الفعال والملائم، الذي غالباً ما يكون كافياً للحد من انتشار المرض بين الفئات السكانية العامة. وهذه الجهود تكون أكثر فعالية عندما تدمج مع التدخلات الهيكلية لضمان توفير بيئة مشجعة للوقاية، وإن الترصُّد الذي يعتد به والبيانات ذات العلاقة مهمان لتخطيط وتقييم التدخلات ولتقييم جهود المكافحة.

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Integrating family planning into Ethiopian voluntary testing and counselling programmes

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Problem Governments and donors encourage the integration of family planning into voluntary testing and counselling (VCT) services. We aimed to determine if clients of VCT services have a need for and will accept quality family planning services.

Approach "Voluntary HIV counselling and testing integrated with contraceptive services" is a proof-of-concept study that interviewed 4019 VCT clients before the addition of family planning services and 4027 different clients after family planning services were introduced. Clients attended eight public VCT facilities in the Oromia region, Ethiopia. The intervention had four components: development of family planning counselling messages for VCT clients, VCT provider training, contraceptive supply provision and monitoring.

Local setting Ethiopia's population of 80 million is increasing rapidly at an annual rate of 2.5%. Contraceptive prevalence is only 15%. The estimated adult HIV prevalence rate is 2.1%, with more than 1.1 million people infected. The number of VCT facilities increased from 23 in 2001 to more than 1000 in 2007, and the number of HIV tests taken doubled from 1.7 million tests in 2007 to 3.5 million in 2008.

Relevant changes Clients interviewed after the introduction of family planning services received significantly more family planning counselling and accepted significantly more contraceptives than those clients served before the intervention. However, three-quarters of the clients were not sexually active. Of those clients who were sexually active, 70% were using contraceptives.

Lessons learned The study demonstrated that family planning can be integrated into VCT clinics. However, policy-makers and programme managers should carefully consider the characteristics and reproductive health needs of target populations when making decisions about service integration.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Voluntary counselling and testing (VCT) is a core part of HIV/AIDS prevention and treatment programmes. Because both VCT and family planning programmes help clients avoid unwanted consequences of their sexual behaviour – HIV and unintended pregnancies – many policy-makers believe that integrating these two services will increase coverage and efficiency.

Ethiopia's population of 80 million is increasing rapidly at an annual rate of 2.5%, meaning it will double in 29 years.[1] Contraceptive prevalence is only 15%.[2] It is estimated that the adult HIV prevalence rate is 2.1%, with over 1.1 million people infected.[3] Despite challenging circumstances, and with significant donor support, Ethiopia has dramatically increased its VCT coverage. The number of VCT facilities increased from just 23 in 2001 to more than 1000 in 2007, and the number of HIV tests taken doubled in just one year, from 1.7 million tests in 2007 to 3.5 million in 2008.[4] With this significant increase in coverage, the large network of VCT clinics has the potential to greatly increase access to family planning information and services.

Ethiopian context

After attending a WHO-sponsored meeting on international best practices in Uganda, Ethiopian government officials and representatives developed a plan to introduce family planning into VCT programmes. They developed a steering committee, which was led by Pathfinder International, Ethiopia. This committee aimed to train public sector VCT counsellors in family planning provision and to initiate integrated services in 20% of service sites for VCT and prevention-of-mother-to-child transmission of HIV in four focus regions. These sites were chosen based on available human resources, interest in participating and proximity to Pathfinder's local implementing partners.

Despite this initiative to integrate HIV and family planning services, there was no empirical evidence that Ethiopian VCT clients had an unmet need for family planning or that service integration would improve access or quality of care for clients. Pathfinder, the Miz-Hasab Research Center, an Ethiopian research firm and the Johns Hopkins Bloomberg School of Public Health joined forces to evaluate the integration programme in eight of Pathfinder's service sites. This research, the "Voluntary HIV Counselling and Testing Integrated with Contraceptive Services" Study, assessed the impact of adding quality family planning services into VCT facilities.

Between November 2006 and February 2008, Pathfinder introduced family planning services into semi-urban hospitals

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(*Submitted: 13 March 2009 – Revised version received: 4 September 2009 – Accepted: 12 October 2009*)

and health centres in Oromia region. First, administrative staff and health providers at all levels were sensitized about the importance of integrating family planning and HIV services, and then VCT service providers were trained in family planning. Pathfinder held five-day training courses on three separate occasions to account for frequent provider turnover. Training curriculum included basic information on the benefits of family planning, contraceptive options and side-effects.

Additionally, facilitators introduced counselling messages and protocols developed specifically for VCT clients, such as men, young people and HIV-positive individuals.

VCT counsellors were authorized to counsel clients on family planning and to offer condoms and contraceptive pills during VCT sessions. Nurse counsellors were also authorized to provide injectable contraceptives. Pathfinder provided a full-range of contraceptive supplies to both VCT and family planning units in all eight facilities. Monthly monitoring visits helped to ensure contraceptive availability within the facilities and resolve problems faced by the VCT counsellors. VCT providers' logbooks were modified to facilitate collection of information about family planning counselling and services, and these data were routinely assessed by Pathfinder, in addition to contraceptive stocks.

Before and after the family planning intervention was implemented, we conducted cross-sectional client interviews. In 2006, 4019 clients receiving standard-of-care VCT were interviewed about their contraceptive practices and needs. Approximately 18 months after introduction of family planning services, 4027 additional clients were interviewed using the same survey instrument.

Table 1. **Characteristics of female clients after introduction of family planning in voluntary counselling and testing facilities**

Characteristics	% (*n* = 2027)
15–24 years old	74.4
Never married	64.0
Secondary or higher education	62.5
Student	41.2
No children	71.0
Urban	86.3
Ever had sex	59.4
Had sex in past 30 days	27.7
HIV-positive	7.7
Women in current sexual unions (*n* = 677)	
Currently using contraceptive method	70.0
Unmet contraceptive need	17.0

Client characteristics

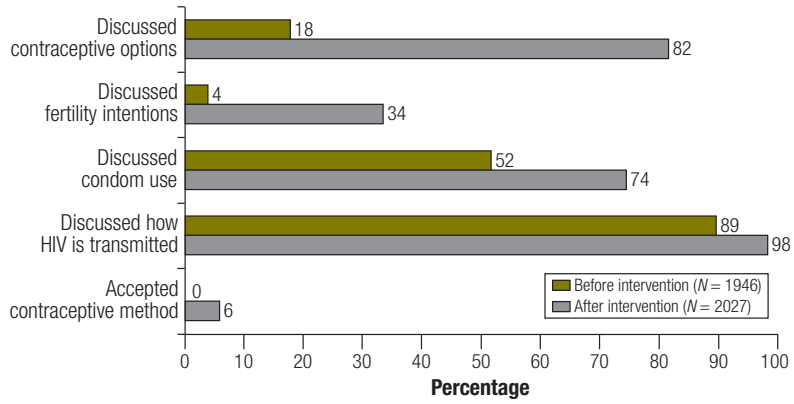
The VCT client profile had some unexpected characteristics. Table 1 outlines the characteristics of female clients who were interviewed at the second point in time, after family planning services were introduced. These VCT clients were young and well-educated. Their average age was 22 years, and more than 74% were younger than 25 years. Over 60% of women had a secondary or higher education and more than 40% were still in school. Most women were single with no children; 64% of them had never married and 71% had no children. This is also a very urban population, with 86% living in urban areas.

The clients in this sample are quite different from the general Ethiopian population, but the most surprising client characteristic was the low level of sexual activity. More than 40% of these women had never had sex, and an additional 32% had not had sex during the last month. HIV prevalence was nearly 8%, which is considerably higher than in the general Ethiopian population, as expected among clients seeking HIV tests.

Not only were many clients sexually inactive, many of the sexually active clients were already using contraception. Among married and other sexually active women, 70% were using contraceptives. Of women in current sexual unions, 17% had unmet contraceptive need, meaning they did not want to have children soon but were having unprotected sex. This is about half of the unmet need that exists in the general Ethiopian population (34%).[2]

Despite the relatively low need for family planning services among study clients, there was an impressive increase in the provision of family planning information in VCT. Fig. 1 shows some of the family planning and HIV topics discussed before and after family planning services were introduced. Four times as many women received information on their contraceptive options

Fig. 1. **Change in information provided and contraceptive use before and after introduction of family planning services to clients of voluntary counselling and testing**



after the intervention and, importantly, this improvement in family planning counselling had no negative impact on HIV counselling. Indeed, significant improvements were also found in this area.

While overall contraceptive uptake was low, there were significant improvements in family planning distribution for women, as almost none of the VCT clients received contraceptive methods, including condoms, at baseline. The largely sexually inactive client population and the percentage of sexually active clients who were already using contraceptives are likely explanations for the low number of clients accepting contraceptive methods.

In-depth analysis was conducted to better understand the kinds of clients who received contraceptive counselling and methods, revealing that clients with higher risk for HIV and unintended pregnancy were much more likely to obtain family planning services. The benefits of integrating family planning and VCT services may thus be more pronounced among higher risk populations.

One of the most unexpected findings from this study was the low level of sexual activity among VCT clients. Based on our survey and in-depth interviews with clients, it seems many low-risk clients seek HIV tests because of their beliefs about modes of HIV transmission. Clients know HIV is transmitted by sexual activity, but they think that it is equally probable that HIV can be transmitted via other unlikely, or even impossible, means.

Limitations

The major limitation of the study is that its principal data sources are two cross-sectional surveys. Because clients are not followed up, we can say nothing about attitudinal and behaviour changes over time. Additionally, the study's client population and service sites may not be representative of other parts of Ethiopia. While such representation is not necessary for a proof-of-concept study, it does mean that it is difficult to extrapolate from the surprising findings of high contraceptive use among the sexually active clients and the very high percentage of non-sexually active clients.

Box 1. **Lessons learned**

- Family planning can be integrated into voluntary counselling and testing clinics.
- The incremental cost of integrating family planning is modest.
- Policy-makers and programme managers should know and understand the characteristics and reproductive health needs of target populations when making decisions about service integration.

Conclusion

In conclusion, most of the surveyed clients were at relatively low risk for HIV and unintended pregnancy, either because they were not having sex or were already using contraceptives. Importantly, however, the quality of both HIV and family planning counselling improved dramatically, indicating, at the very least, that service integration is possible in the Ethiopian context. Because our facilities were not sampled using probability methods, they may have performed better or been different in terms of client catchment populations than other VCT facilities; therefore, one should exercise caution in generalizing the findings.

The incremental cost of integrating family planning is modest in the country's present funding environment. In 2008, Ethiopia received over US$ 630 million for combating HIV/AIDS. More than half of this amount was from the President's Emergency Plan for AIDS Relief (PEPFAR), which is the major source of funds for the country's VCT programme.[5] The cost for family planning training was US$ 325 per trainee. The only major recurring cost was the regular monitoring visits by Pathfinder, which had an annual cost of US$ 1562 per facility. To have a comparable level of monitoring for all of the country's VCT facilities, the annual cost would be US$ 1.5–2.0 million.

The most salient finding from this study, however, is that policy-makers and programme managers should know and understand the target client population before deciding whether service integration is likely to be efficacious or cost-effective. The reproductive health needs of the target population should be the single most important factor underlying decisions to scale up integrated services. This study suggests that an integrated VCT programme targeting populations at risk for HIV or unintended pregnancy may be an effective programmatic option (Box 1). ■

Acknowledgements

We thank Chandrakant Ruparelia.

Funding: This study was funded by The David and Lucile Packard Foundation, The William and Flora Hewlett Foundation, and The Bill and Melinda Gates Institute for Population and Reproductive Health. The funders had no role in the design or conduct of the study.

Competing interests: None declared.

Résumé

Intégration des services de planification familiale dans les programmes de conseil et de dépistage volontaire

Problématique Les Etats et les donateurs encouragent l'intégration des services de planification familiale à ceux de conseil et de dépistage volontaire (CDV). Nous nous sommes efforcés de déterminer si les clients des services de CDV avaient besoin de services de planification familiale de qualité et s'ils les accepteraient.

Démarche Le concept d'intégration des services de conseil et de dépistage volontaire et des services de contraception a été soumis à une étude de validité, dans le cadre de laquelle on a interrogé 4019 clients de services de CDV avant l'adjonction des services de planification familiale et 4027 autres clients après l'introduction de ces services. Les clients avaient consulté huit centres publics de CDV de la région d'Oromia, en Ethiopie. L'intervention comprenait quatre composantes : mise au point de messages apportant des

conseils en matière de planification familiale aux clients des services de CDV, formation des prestateurs de services de CDV, fourniture de moyens contraceptifs et surveillance.
Contexte local La population éthiopienne de 80 millions d'habitants augmente rapidement, avec un taux de croissance annuel de 2,5 %. La prévalence de la contraception n'est que de 15 %. Le taux de prévalence du VIH chez les adultes est estimé à 2,1 %, avec plus de 1,1 million de personnes infectées. Le nombre d'unités délivrant des services de CDV est passé de 23 en 2001 à plus de 1000 en 2007 et le nombre de tests de dépistage du VIH effectués a doublé entre 2007 et 2008, passant de 1,7 millions à 3,5 millions.
Modifications pertinentes Les clients interrogés après l'introduction des services de planification familiale avaient reçu notablement plus de conseils de planification familiale et avaient accepté nettement plus de contraceptifs que ceux servis avant l'intervention. Cependant, les trois-quarts de ces clients n'étaient pas sexuellement actifs Parmi les clients sexuellement actifs, 70 % utilisaient des moyens contraceptifs.
Enseignements tirés Cette étude a démontré que les services de planification familiale pouvaient être intégrés dans les dispensaires proposant des services de CDV. Néanmoins, les décideurs politiques et les gestionnaires de programmes devraient étudier soigneusement les caractéristiques et les besoins en matière de santé génésique des populations visées lors de la prise de décisions concernant l'intégration de ces services.

Resumen

Integración de la planificación familiar en los programas de asesoramiento y pruebas voluntarias del VIH de Etiopía

Problema Los gobiernos y los donantes promueven la integración de la planificación familiar en los servicios de asesoramiento y pruebas voluntarias (APV) del VIH. Decidimos determinar si los usuarios de los servicios de APV tienen necesidad de servicios de planificación familiar de calidad y si los aceptarían.
Enfoque «Integración del asesoramiento y pruebas voluntarias de detección del VIH con los servicios de anticoncepción» es un estudio demostrativo preliminar en el que se entrevistó a 4019 usuarios de APV antes de la inclusión de los servicios de planificación familiar, y a 4027 usuarios diferentes después de introducir dichos servicios. Se trata de usuarios que acudieron a ocho servicios públicos de APV de la región de Oromia, Etiopía. La intervención comprendía cuatro componentes: elaboración de consejos de planificación familiar para los usuarios de APV, capacitación de los proveedores de APV, suministro de anticonceptivos y seguimiento.
Contexto local La población de Etiopía asciende a 80 millones de habitantes y está aumentando rápidamente a un ritmo anual del 2,5%. La prevalencia de uso de anticonceptivos es sólo del 15%. La prevalencia de la infección por VIH en adultos es del 2,1%, con más de 1,1 millones de personas infectadas. El número de servicios de APV aumentó de 23 en 2001 a más de 1000 en 2007, y el número de pruebas del VIH realizadas se duplicó, pasando de 1,7 millones en 2007 a 3,5 millones en 2008.
Cambios destacables Los usuarios entrevistados tras la introducción de los servicios de planificación familiar habían recibido significativamente más consejos de planificación familiar y aceptado significativamente más anticonceptivos que los atendidos antes de la intervención. Sin embargo, tres de cada cuatro usuarios no eran sexualmente activos. Entre los usuarios sexualmente activos, el 70% estaban utilizando anticonceptivos.
Enseñanzas extraídas El estudio demostró que es posible integrar la planificación familiar en los consultorios de APV. No obstante, los planificadores de políticas y los gestores de programas deberían analizar detenidamente las características y las necesidades de salud reproductiva de las poblaciones destinatarias en su toma de decisiones sobre la integración de los servicios.

ملخص

إدماج تنظيم الأسرة في برامج الالتماس الطوعي للاختبار والمشورة

المشكلة: إن الحكومات والجهات المانحة تشجع على إدماج خدمات تنظيم الأسرة وخدمات الالتماس الطوعي للاختبار والمشورة. ويهدف الباحثون هنا إلى تحديد ما إذا كان المستفيدون من خدمات الالتماس الطوعي للاختبار والمشورة يحتاجون إلى وسيتقبلون خدمات تنظيم الأسرة عالية الجودة.
الأسلوب: يعتبر "التكامل بين خدمات الالتماس الطوعي للاختبار والمشورة لفيروس الإيدز وخدمات موانع الحمل" مفهوماً حاولت إثباته دراسة تضمنت إجراء مقابلة لـ 4019 مستفيداً من خدمات الالتماس الطوعي للاختبار والمشورة قبل إضافة خدمات تنظيم الأسرة إليها، ومقابلة لـ 4027 من مختلف المستفيدين بعد تقديم خدمات تنظيم الأسرة. وكان هؤلاء المستفيدون يراجعون ثمانية مرافق عامة تقدم خدمات الالتماس الطوعي للاختبار والمشورة في منطقة أورمايا في إثيوبيا. وكان للتدخل أربعة مكونات هي: إعداد رسائل المشورة الخاصة بتنظيم الأسرة للمستفيدين من الالتماس الطوعي للاختبار والمشورة، وتدريب مقدمي خدمات الالتماس الطوعي للاختبار والمشورة، وتقديم إمدادات موانع الحمل، والرصد.
الأوضاع المحلية: يبلغ تعداد سكان إثيوبيا 80 مليوناً وهم يتزايدون بسرعة بمعدل سنوي قدره 2.5%. بينما يبلغ معدل انتشار استخدام موانع الحمل 15% فقط. ويبلغ المعدل التقديري لانتشار فيروس الإيدز بين البالغين 2.1%، وهناك أكثر من 1.1 مليون مصاب به. وقد ازدادت أعداد مرافق تقديم خدمات الالتماس الطوعي للاختبار والمشورة من 23 مرفقاً في عام 2001 إلى أكثر من 1000 مرفق في 2007، وتضاعف عدد اختبارات فيروس الإيدز التي أجريت من 1.7 مليون اختبار في 2007 إلى 3.5 مليون اختبار في 2008.
التغيرات ذات الصلة: أُجريت مقابلة مع المستفيدين بعد إدخال خدمات تنظيم الأسرة وتبين أنهم تلقوا قدراً أكبر من المشورة حول تنظيم الأسرة وتقبلوا أكثر كثيراً موانع الحمل من المستفيدين الذين جرت خدمتهم قبل تنفيذ هذا التدخل. إلا أن ثلاثة أرباع هؤلاء المستفيدين لم يكونوا نشطين جنسياً، وكان 70% من النشطين جنسياً منهم يستخدمون وسائل لمنع الحمل.
الدروس المستفادة: أظهرت الدراسة أنه يمكن إدماج خدمات تنظيم الأسرة في العيادات التي تقدم خدمات الالتماس الطوعي للاختبار والمشورة. لكن على راسمي السياسات ومديري البرامج الحرص في مراعاة سمات واحتياجات الصحة الإنجابية للسكان المستهدفين عند اتخاذ القرارات الخاصة بالتكامل بين الخدمات.

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Difficulties in organizing first indoor spray programme against malaria in Angola under the President's Malaria Initiative

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Problem Successful attempts to control malaria require understanding of its complex transmission patterns. Unfortunately malaria transmission in Africa is often assessed using routine administrative reports from local health units, which are plagued by sporadic reporting failures. In addition, the lack of microscopic analyses of blood slides in these units introduces the effects of many confounding diseases.

Approach The danger of using administrative reports was illustrated in Angola, the first country in which malaria control was attempted under the President's Malaria Initiative, a development programme of the Government of the United States of America.

Local setting Each local health unit submitted monthly reports indicating the number of suspected malaria cases to their municipality. The identification of the disease was based on clinical diagnoses, without microscopic examination of blood slides. The municipal and provincial reports were then passed on to the national headquarters, with sporadic reporting lapses at all levels.

Relevant changes After the control effort was completed, the defective municipal reports were corrected by summarizing only the data from those health units which had submitted reports for every month during the evaluation period.

Lessons learned The corrected data, supplemented by additional observations on rainfall and mosquito habitats, indicated that there had probably been no malaria transmission before starting the control operations. Thus the expensive malaria control effort had been wasted. It is unfortunate that WHO is also trying to plan and evaluate its malaria control efforts based on these same kinds of inadequate administrative reports.

Une traduction en français de ce résumé figure à la fin de l'article. *Al final del artículo se facilita una traducción al español.* الترجمة العربية لهذه الخلاصة في نهاية النص الكامل لهذه المقالة.

Introduction

Control of malaria in epidemic-prone areas of Africa is difficult, partly because of rapid changes in transmission. Where there are short and erratic rainy seasons, control efforts are especially important in rainy years when malaria is deadly, but can be virtually irrelevant in dry years when there is no transmission. This was illustrated in the first attempt to control malaria in Africa by the President's Malaria Initiative (PMI), a development programme of the Government of the United States of America.

Context

Malaria is an important disease in Angola, where Portuguese is the official language. Malaria is given as the reason for half of all hospital admissions and one-quarter of all hospital deaths. In a population of 10–15 million people, there are 1.5 million malaria cases reported annually.[1–3]

In 2005, under the direction of the US Agency for International Development (USAID), PMI began with a malaria control programme in Angola.[2] It is not clear why Angola, a country with rich oil resources, was selected. Even though rising oil revenues generated over US$ 1000 per capita, only US$ 1 per capita was designated for malaria in the national budget.[4] In the southern provinces where the project started, there was only one malaria officer and one vehicle. The technical staff of the National Malaria Control Program (NMCP) in the capital city of Luanda consisted of four people. They had no vehicles at their headquarters and only a small laboratory and storage room.

Crude data on malaria distribution were provided by the Ministry of Health in reports received from the provinces through normal administrative channels. USAID selected southern Angola as the target area, based on these administrative reports.

Vigorous objections by the authors to the lack of reliable current data on mosquitoes and malaria for the proposed spray area were overcome by what proved to be false reassurances from USAID that staff from the US Centers for Disease Control (CDC) would collect the data in due time.

USAID decided in advance to use spraying of houses with the synthetic pyrethroid lambdacyhalothrin in a wettable powder formulation with 10% active ingredient as the sole control method. It was to be sprayed at 0.03 mg of active ingredient per square metre of interior wall.[5]

Using spraying as the only method for malaria control can be fast but is unusual. Normally several methods are used in an integrated strategy.[6–12] At least six key components were included in large malaria control efforts by WHO in Nigeria and the Sudan in previous decades.[13]

In an effort to rush initiation of the PMI, one of the consultants hired by USAID – the technical director – was sent to Angola in August 2005, within a month of PMI being announced. Because USAID was unable to arrange a meeting

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(*Submitted: 28 February 2008 – Revised version received: 16 January 2009 – Accepted: 26 January 2009 – Published online: 24 July 2009*)

Table 1. **Comparison of presumed cases of malaria reported by Huila provincial health care system during peak of malaria seasons in 2005 and in 2006**

Municipality	Jan 2005	Feb 2005	Mar 2005	Total cases in 2005	Jan 2006	Feb 2006	Mar 2006	Total cases in 2006	Ratio (%) of malaria cases 2006/2005
Sprayed in 2006									
Humpata	811	1 122	1 822		378	858	535		
Lubango	9 601	10 013	10 768		9 511	8 707	10 440		
Total	10 412	11 135	12 590	34 137	9 889	9 565	10 975	30 429	89
Not sprayed									
Chibia	1 606	2 146	3 431		1 781	2 447	1 724		
Kakondo	2 387	4 234	4 171		6 664	1 341	2 038		
Total	3 993	6 380	7 602	17 975	8 445	3 788	3 762	15 995	89

with the NMCP in Luanda, the technical director travelled directly to the target area in the south. About 400 local men and women were quickly trained to spray the interior walls of houses.

Findings

By most measures the spray programme was efficient. The spraying was accomplished at the ideal time in the malaria transmission cycle; just as very light rains began in early December 2005. Spraying continued to the end of March 2006, reaching houses of half a million people in Huila and Kunene Provinces.

After the spray programme was underway, simple observations by the technical director indicated a general absence of adult malaria mosquitoes throughout the province and even an absence of suitable larval habitats. Also, retrospective analysis of rainfall data from a local airport indicated that southern Angola was in the fifth year of a worsening drought, a likely explanation for the lack of mosquitoes.

The problem

Two factors distorted the administrative reports on malaria: irregular omissions of monthly reports from various health units and lack of laboratory confirmation of the malaria cases. Thus other fever-causing diseases were certainly included in the reporting, such as diarrhoeal diseases and seasonal viral infections. This is a problem in many parts of Africa.

The reported malaria data were reanalysed to remove the impact of erratically omitted monthly reports. Further analysis was restricted to those units that had reported data for every month for the entire period of comparison.

The corrected numbers of cases of reported malaria were compared for 2005 and for 2006 in Humpata and Lubango, the two municipalities that had been sprayed, and for Chibia and Kakondo, two similar municipalities in Huila Province that had not been sprayed.

During the normal malaria transmission period in January, February and March of 2006, after the houses in Humpata and Lubango had been sprayed, the number of malaria cases was 30 429, about 89% of the 34 137 reported for the same months during 2005 when no spraying had been conducted (Table 1).

Furthermore, in adjacent and similar unsprayed municipalities of Chibia and Kakondo, the numbers of malaria cases in 2006 was 15 995, also 89% of the 17 975 cases reported in 2005 (Table 1). Thus there was no detected impact of the spraying on reported malaria cases when sprayed and unsprayed municipalities were compared.

Discussion

Implementation of this large-scale malaria control effort despite the lack of malaria transmission in southern Angola during 2005–2006 was unique and unfortunate. One fault of this project was the rush to spray. Seldom has a large spray programme been so hurried that pretreatment evaluation was omitted.[10–13] This mistake might be due to lack of experience of the PMI leadership with the complexities of malaria control in Africa. It might also have been wiser to start PMI in a country with a stronger commitment to malaria control.[14] Future PMI projects in Angola would also benefit from greater language proficiency by all USAID and CDC personnel.

Unfortunately the global malaria control effort by WHO is currently being evaluated by the same faulty process that caused this mistake in Angola, using administrative reports to evaluate epidemiological progress.[1,2,15] Careful monitoring of rainfall and epidemiology greatly improves the cost-effectiveness of malaria control.[16]

Conclusion

The first PMI programme to control malaria in Africa failed to have an impact in southern Angola because of hurried and inadequate preparation, based primarily on administrative reports of malaria prevalence (Box 1). ■

Competing interests: None of the authors currently work for PMI or USAID.

Box 1. **Lessons learned**

- Preparation is important. Don't rush the project.
- Determine real need for the programme before investing time and money.
- Obtain reliable current data. Don't rely on administrative reports to provide prevalence data.

Résumé

Difficultés dans l'organisation du premier programme de pulvérisations intradomiciliaires contre le paludisme en Angola, dans le cadre de l'Initiative du Président contre le paludisme

Problématique Le succès des tentatives pour endiguer le paludisme passe par la compréhension des schémas complexes régissant la transmission de cette maladie. Malheureusement, en Afrique, la transmission du paludisme est souvent évaluée d'après des rapports administratifs de routine émis par des unités sanitaires locales, lesquels rapports font sporadiquement défaut. En outre, la pratique insuffisante par ces unités d'examens microscopiques confirmatoires d'étalements sanguins fait jouer à d'autres maladies le rôle de facteur de confusion.

Démarche Les risques de l'utilisation des rapports administratifs de routine ont été illustrés en Angola, premier pays à tenter d'endiguer le paludisme dans le cadre de l'Initiative du Président contre le paludisme, un programme de développement du gouvernement des États-Unis d'Amérique.

Contexte local Chaque unité sanitaire locale a soumis des rapports mensuels indiquant le nombre de cas présumés de paludisme à sa municipalité. L'identification de la maladie reposait sur le diagnostic clinique, sans examen au microscope d'étalements sanguins. Les rapports municipaux et provinciaux étaient ensuite transmis au siège national, avec des absences sporadiques de rapport à tous les niveaux.

Modifications pertinentes A l'issue de l'effort mené contre le paludisme, les rapports municipaux lacunaires ont été corrigés en ne compilant les données que pour les unités sanitaires ayant soumis des rapports tous les mois pendant la période d'évaluation.

Enseignements tirés Les données corrigées et complétées par des observations supplémentaires sur les précipitations et les habitats des moustiques ont indiqué qu'il n'existait probablement par de transmission du paludisme avant le début des interventions contre cette maladie. Ainsi, l'effort coûteux mené contre le paludisme avait été pur gaspillage. Il est également malheureux que l'OMS tente de planifier et d'évaluer ses efforts contre le paludisme sur la base de rapports administratifs inadéquats du même type.

Resumen

Problemas de organización del primer programa de rociamiento de interiores contra la malaria en Angola en el marco de la Iniciativa del Presidente contra la Malaria

Problema Si se quiere controlar eficazmente la malaria es preciso comprender la complejidad de su transmisión. Lamentablemente, en África la transmisión de esta enfermedad suele evaluarse a partir de los informes administrativos rutinarios de unidades de salud locales, que contienen abundantes errores de notificación. Además, la falta de análisis microscópicos de frotis sanguíneos en esas unidades conlleva la interferencia de numerosas enfermedades de confusión.

Enfoque Los riesgos de usar informes administrativos han quedado patentes en Angola, primer país que ha intentado combatir la malaria en el marco de la Iniciativa del Presidente contra la Malaria, un programa de desarrollo del Gobierno de los Estados Unidos de América.

Contexto local Todas las unidades de salud locales enviaban mensualmente a su municipalidad informes en los que indicaban el número de casos sospechosos de malaria. La identificación de la enfermedad se basaba en el diagnóstico clínico, sin examen microscópico de frotis sanguíneos. Los informes municipales y provinciales se transmitían luego a las sedes nacionales, con lapsos de notificación esporádicos a todos los niveles.

Cambios destacables Una vez finalizadas las actividades de control, los informes municipales defectuosos fueron corregidos resumiendo solo los datos de las unidades de salud que habían enviado informes para cada mes durante el periodo de evaluación.

Enseñanzas extraídas Se desprende de los datos corregidos -complementados con observaciones adicionales sobre las precipitaciones y los hábitats de los mosquitos- que probablemente no había habido transmisión de la malaria antes de dar comienzo a las operaciones de control. Así pues, el mucho dinero invertido en esta iniciativa antimalárica se despilfarró. Es de lamentar que la OMS pretenda también planificar y evaluar sus actividades de control de la malaria basándose en el mismo tipo de informes administrativos inadecuados.

ملخص

صعوبات في تنظيم أول برنامج لرش المبيدات داخل المنازل في أنغولا ضمن المبادرة الرئاسية لمكافحة الملاريا

المشكلة: تتطلب المحاولات الناجحة لمكافحة الملاريا فهماً لأنماط انتقالها المعقدة. ومن المؤسف أن تقييم سراية الملاريا في أفريقيا يجري غالباً باستخدام بلاغات إدارية روتينية صادرة عن الوحدات الصحية المحلية، التي تعاني كل حين وآخر من فشل نظام التبليغ فيها. بالإضافة إلى، أن نقص التحليل المجهري لشرائح الدم في هذه الوحدات يؤدي إلى تأثر التشخيص بعديد من الأمراض المثيرة للارتباك.

الأسلوب: إن خطر استخدام البلاغات الإدارية كان ظاهراً في أنغولا، وهي أول دولة تجري محاولة مكافحة الملاريا فيها ضمن المبادرة الرئاسية لمكافحة الملاريا، وهي برنامج تنموي تدعمه حكومة الولايات المتحدة الأمريكية.

الأوضاع المحلية: ترفع كل وحدة صحية محلية إلى البلدية التابعة لها بلاغات شهرية تشير إلى عدد حالات الملاريا المشتبه بها. ويعتمد اكتشاف المرض على التشخيص السريري، بدون اللجوء إلى الفحص المجهري لشرائح الدم. ثم ترفع البلاغات من البلديات والمناطق إلى الإدارة الوطنية المختصة، وتقع كل حين وآخر أخطاء على جميع مستويات نظام التبليغ.

التغيرات ذات العلاقة: بعد اكتمال جهود المكافحة، يتم تصحيح البلاغات التي بها أخطاء، والواردة من البلديات، عن طريق تلخيص البيانات التي وردت من الوحدات الصحية التي تكون قد دأبت على تقديم البلاغات الشهرية طوال فترة التقييم.

الدروس المستفادة: تشير البيانات التي جرى تصحيحها، واستكمالها بمشاهدات إضافية حول هطول الأمطار ومواطن معيشة البعوض، إلى احتمال عدم حدوث سراية للملاريا قبل بدء عمليات المكافحة هناك. وأن الجهود المكلفة لمكافحة الملاريا قد أهدرت. ومن المؤسف أن منظمة الصحة العالمية تحاول أيضاً تخطيط جهود مكافحة الملاريا وتقييمها اعتماداً على هذه الأنواع من البلاغات الإدارية غير الملائمة.

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Ensuring human and sexual rights for men who have sex with men living with HIV

Kevin Moody[a]

In December 2008, Senegal hosted the International Conference on AIDS and Sexually Transmitted Infections in Africa, a prestigious regional conference affiliated with the biannual International AIDS Conference, highlighting advancements in HIV prevention, treatment and support in Africa. After the conference, on 22 December, the Senegalese government arrested nine members of AIDES Senegal, a nongovernmental organization that works on HIV prevention and support for people living with HIV. In January 2009, all nine were convicted as homosexuals and received the full 5 years' imprisonment allowable by law for that charge plus an additional 3 years for "criminal association".[1] Following significant international pressure, the convictions were ultimately overturned on appeal, after the men had spent almost 3 months in jail.

When countries sign declarations of rights – human, health, workplace – there are no exemption clauses stating: "These rights apply to everyone except men who have sex with men (MSM) and people living with HIV". However, in practice, HIV-positive MSM are not able to access their full rights, either due to repressive laws or discrimination practices. Violations of rights are not reported due to fear of reprisals and, in the rare cases that reports are made, they are not taken seriously. The Yogyakarta Principles unequivocally demonstrate that the application of rights is universal and that MSM living with HIV should have universal enjoyment of human rights; the right to equality and non-discrimination; the right to recognition before the law; the right to life; the right to the security of the person; the right to privacy; the right to freedom from arbitrary deprivation of liberty and 22 further named rights, including the right to health.[2]

With the exception of very few countries, however, the experiences of MSM include discrimination, imprisonment and, in some countries, death.[3] Being HIV positive compounds stigma and discrimination because of fear and ignorance surrounding HIV transmission and the social attitudes and perceptions towards MSM. HIV-positive MSM experience discrimination both due to their sexuality and their HIV status. In some countries, the transmission of HIV, irrelevant of sexual orientation or gender, can lead to convictions. The Global Network of People Living with HIV (GNP+) and the Terrence Higgins Trust are collaborating on the Global Criminalization Scan, which documents country laws that penalize HIV transmission and exposure.[4] This will be expanded to include laws that contribute to hindering the HIV/AIDS response, including laws that criminalize MSM. Laws that penalize HIV transmission and homosexuality contribute to stigma and discrimination for people living with HIV and MSM.

This double stigma can cause MSM – both HIV-positive and negative – to avoid or fear accessing health services, including counselling and testing, treatment, prevention and support. GNP+ will launch in the coming months the Human Rights Count!, an online database that will allow for the confidential reporting of human rights violations against people living with HIV, including MSM. Even in the Netherlands, where their rights and freedoms are protected, stigma prevails and can be a deterrent to learning one's HIV status.[5]

It is critical to collect evidence in countries where the environment for MSM and people living with HIV is more inhospitable, to evaluate the effect of stigma on public health and determine mechanisms to fight it. Threat of arrest, conviction or even stigma alone may convince MSM to hide. This means that, even though they may be most at risk of HIV infection, they will not seek health services that would help them to deal with HIV, including information, education, testing, counselling, treatment and support.

GNP+, along with the International Community of Women Living with HIV, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the International Planned Parenthood Federation are currently implementing a mechanism – the HIV stigma index – to document the way in which people living with HIV (including MSM and other key populations) experience and are affected by stigma and discrimination. The aim is to inform and improve policies and programmes in countries, including decriminalization of homosexuality and HIV transmission. In spite of this, it is evident that decriminalization alone will not necessarily lead to reduced discrimination. In South Africa, where MSM are protected by the most robust constitution in the world and where same-sex couples have the same rights and freedoms – including marriage – as anyone else, a study showed that perceptions of MSM are still negative, even more than 10 years after the adoption of the current constitution. Changing laws is the first step. Changing minds will take much longer.[6]

MSM living with HIV have the same desires and aspirations as other people. They want to contribute to society through their work and their spiritual lives. However, many feel that they need to hide their sexuality from their colleagues, friends and congregations. MSM living with HIV may consider having children. Whereas in the past it was not possible to think about genetic offspring, they now have various child-bearing options using strategies including prevention of vertical transmission, pre- and post-exposure prophylaxis, promising research into antiretroviral-based microbicides and treatment. In spite of this, it is not legal

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(Submitted: 27 March 2009 – Revised version received: 25 August 2009 – Accepted: 28 August 2009)

in many countries for MSM living with HIV to have children, either through reproductive technologies or adoption.

For many cultures, sex is publicly expressed as a means to an end: reproduction. However, most humans don't consider sex just as a means to have children but also as a means of enjoying satisfying and pleasurable experiences that strengthen their relationships. MSM want and expect the same from their sex lives.

In December 2007, GNP+, the International Community of Women Living with HIV and Young Positives, supported by partners from the United Nations and civil society, brought together people living with HIV from around the globe and from various perspectives, including MSM, transgender people, sex workers and young people to discuss sex and sexuality and how this relates to people living with HIV. Recommendations highlighted in the Amsterdam Statement demonstrate clearly that sexual minorities (including MSM) are an important part of the community of people living with HIV and that measures must be taken to ensure that they enjoy full rights equal to those in the majority or who are HIV-negative.[7]

Advancing the sexual and reproductive health and human rights of people living with HIV: a guidance package[8] is a four-part paper that served as the basis for the Global Consultation on the Sexual and Reproductive Rights of People Living with HIV in Amsterdam in December 2007 and in a more advanced form for LIVING 2008: Positive Leadership Summit which took place in Mexico City in August 2008. Among the many recommendations, it was clear that access to prevention, treatment and care services for people living with HIV – including MSM – requires an enabling environment free of punitive laws and stigma and discrimination.

Ask any diverse gathering of people if they have ever experienced discrimination based on their gender, ethnicity, religion or sexuality. Most will say "yes" – discrimination is not unique to HIV-positive MSM. One would think that the misery of experiencing discrimination would lead to a universal understanding that would result in less suffering, not more. Unfortunately this is not the case. The individual and public health consequences of this discrimination for MSM living with HIV, if not addressed, can lead to increased HIV infections and reduced access to adequate treatment, care and support.

Laws, perceptions and practices need to change quickly to ensure that HIV-positive MSM benefit from prevention, treatment, care and support services. They must be able to exercise their full rights as citizens, including the right to life, the right to form families and the right to health. Prosecutions of the kind made in Senegal need to end. Stigma and discrimination, even in countries that fully protect the rights of HIV-positive MSM, must be investigated and addressed. Unless human rights are honoured and stigma and discrimination are adequately fought, the efforts to prevent HIV transmission and treat and support those living with the virus will be in vain for those who have the most to gain. ■

Competing interests:
None declared.

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Young people, sexual and reproductive health and HIV

Raoul Fransen-dos Santos[a]

One quarter of the world's population is made up of 1.7 billion young people aged 10–24, 1.5 billion of whom live in developing countries where HIV/AIDS has reduced their chances of living to the age of 60 by 20%.[1] Despite their vulnerability to HIV infection, young people's needs are often overlooked when national AIDS strategies are designed and implemented.[1]

Half of all new HIV infections occur among young people, aged 15–24.[2] In 2007, an estimated 33.2 million people were living with HIV, 5.4 million of whom were aged 15–24 years. In sub-Saharan Africa, there are 3.2 million young people living with HIV, with a ratio of three young women infected for every young man.[3]

In 2001, governments committed that 90% of young people would be able to correctly identify modes of HIV transmission and prevention by 2005.[4] Yet, by 2007 only 40% of young males and 36% of young females had accurate HIV knowledge.[4]

Until recently, these statistics were only used to address youth as a target group for prevention messages, rather than allowing each new generation to work through the issues themselves. We are slowly recognizing youth as a resource and actively involving them in finding solutions. Is it too little, too late?

One of the great challenges in HIV prevention is that today's young people have never known a world without AIDS; they did not experience the shocking early days of the "new disease". Improved (access to) treatment has changed HIV and the image of AIDS from a fatal disease to "just a sexually transmitted infection". Many young people are fatigued by prevention campaigns that are out-dated or unrealistic. Not all youth experience the same HIV vulnerabilities. An impoverished young girl in a rural village in Malawi has different needs in terms of effective HIV prevention than emerging gay youth in the *favelas* of Rio. The key lies in providing young people with the information and tools they need to make safe and healthy choices. But they must be true choices, not based on other people's ideologies.

Girls and boys

Young women and girls are disproportionately vulnerable to contracting HIV/AIDS due to biological factors and structural elements of culture, economic and social inequalities. Marriage and long-term relationships do not protect them from contracting HIV and insisting on abstinence is simply not realistic.

To address the global feminization of the epidemic, policies, programmes, legislative frameworks and social norms must guarantee women's rights, ensure protection from gender-based violence and discrimination. Despite the numerous references in national and international documents to the rights of women and girls, few countries have actually implemented and enforced policies and laws that protect such rights.

While the focus on young women and girls remains necessary, particularly in areas such as sub-Saharan Africa where more than 75% of those living with HIV are female, it risks excluding the very group whose involvement is essential if we are to successfully turn the tide on HIV; namely, young men, particularly those living with HIV.[5] The engagement of young men is also essential to improve their own health outcomes.

The importance of directly engaging young men and boys in shaping the response to HIV and AIDS is clearly reflected within the 1994 International Conference on Population and Development Programme of Action. Commitments to ensure special efforts around this have been reiterated in several key international declarations since then.[6]

Traditional sex education and HIV prevention often focus (intentionally or otherwise) on young women and do not adequately address the needs of young men.[7] Sexual and reproductive health clinics are often perceived, and indeed sometimes promote themselves, as "feminine spaces". Young men often feel uncomfortable visiting these clinics, which frequently lack services catering for their specific needs. There is a shortage of male service providers, who have a vital role in helping young men articulate their thoughts and feelings about sex and sexually transmitted infections. Programmes need to be gender-transformative, changing preconceived gender notions and promoting relationships between men and women that are fair and just.[8]

Prevention

Too often, prevention activities focus merely on the biological or medical facts or provide ideological approaches to sexuality and choice, rather than addressing the needs of young people living with HIV and enabling them to continue living positively.

Young people who contract HIV around birth experience unique challenges. Interventions targeting this group to date have tended to emphasize delaying sexual debut, reducing the number of sexual partners and condom use, rather than providing comprehensive information and support on sexual reproductive health and rights. With an increasing number of young people born with HIV reaching adolescence, it is more important than ever to address the specific needs of this group.

Young people living with HIV have their own specific needs and desires for sexual reproductive health. Greater focus is needed on the specific prevention, treatment and care required by this group, including psychosocial support and sexuality counselling. Such activities should be implemented in a "positive prevention" framework[9] that aims to protect their sexual health, avoid other sexually transmitted infections, delay HIV/AIDS disease progression and avoid onward HIV transmission, includ-

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(Submitted: 3 April 2009 – Revised version received: 9 September 2009 – Accepted: 14 September 2009)

ing mother-to-child transmission, based on the following guiding principles.[10]

Promotion of human rights

This should ensure the right to privacy, confidentiality, informed consent and voluntary disclosure. Stigma and discrimination – including self-stigma – drive people underground and make prevention even more difficult. A supportive and enabling legal environment is a fundamental cornerstone as it recognizes that prevention strategies based on coercion and criminalization are not the answer.

Involvement

People living with HIV must be involved in the decisions relating to their life. In accordance with the Greater Involvement of People Living with HIV (GIPA) principle, the active engagement of people living with HIV in determining their own prevention approach is key to success in ensuring relevance, efficacy and applicability.

Shared ownership

Positive prevention places the responsibility for reducing HIV transmission on everybody and removes the undue burden on people who are aware of their status. Safer and responsible sexual behaviour is the responsibility of all partners – irrespective of status. Promoting a culture of shared responsibility could also improve communication and equality within relationships.

Recognition of diversity

People living with HIV are heterogeneous and represent a cross-section of all sectors of society. Issues of race, ethnicity, gender, orientation, age, language, and risk profile will all have an effect on how positive prevention initiatives need to be tailored, including approaches adopted in service delivery and programming as well as in advocacy efforts. With clinical settings being one obvious venue for interventions, positive prevention also needs to reach out to networks, organizations and support groups of people living with HIV. Specifically tailored information and support also needs to be provided to key vulnerable populations (sex workers, men who have sex with men and injecting drug users).

Positive prevention has to be conceived as part of the comprehensive prevention agenda. Moreover, HIV programmes should deliver a comprehensive package of inclusive messages – irrespective of status – which could act as a modality for stigma reduction. At a technical consultation held by the Global Network of People living with HIV (GNP+) and the Joint United Nations Programme on HIV/AIDS (UNAIDS) in April 2009, people living with HIV reinforced the importance of a supportive and protective legal and policy environment free of stigma and discrimination in a new framework: "Positive Health, Dignity and Prevention,"[11,12] promoting a more holistic approach to prevention, including equitable access to voluntary HIV testing, treatment, care and support services and the need to address psychosocial, economic, educational and sociocultural vulnerabilities, gender and sexuality. In this way positive prevention does not become an excuse for shifting the responsibility for prevention onto people who are already marginalized and particularly vulnerable. Furthermore, it does not aim to have disclosure as an end point – as disclosure does not guarantee safe behaviour(s).

Counselling and testing

Most young people living with HIV do not know their status. Most young people, who have been at risk of HIV infection, have never been tested.[13] Merely increasing access to testing will not solve most of the issues around this. Rather than rolling out provider-initiated testing or even mandatory testing, we need to address the obstacles to HIV testing. Focusing efforts on increasing the number of people who know their (positive) status does not mean we will have made any improvements in fighting stigma and discrimination or in providing better care and prevention. Moreover, the different role and concept of counselling in voluntary versus provider-initiated counselling and testing needs to be seriously revised. The importance of good quality counselling (pre- and post-test, but also sexuality counselling) has not been sufficiently recognized in developing or revising strategies to get more people tested.

Sexual rights?

Possibly the greatest challenge is the increasing complexity of HIV. Nearly 30 years into the epidemic, HIV treatment has improved, quality of and access to medication, care and services are improving, but HIV-related stigma is getting worse in many settings, even in western Europe and North America. If we continue to fail to acknowledge, protect and celebrate people's rights and diversity, we are far from pushing back the epidemic. With governments and United Nations agencies struggling to adapt effective strategies on comprehensive sexuality education and counselling – even to mention such wording in publications – and with sexual rights still not much more than a concept, we will not be able to improve the quality of life of so many (young) people. Today's young people will be responsible for sustaining the response to HIV/AIDS. We have to enable new generations to take on this task. ■

Competing interests:
None declared.

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More health for your buck: health sector functions to secure environmental health

Eva A Rehfuess,[a] Nigel Bruce[b] & Jamie K Bartram[c]

Introduction

Modifiable environmental risk factors are responsible for approximately one quarter of the global burden of disease. This environmental burden of disease is distributed extremely unequally: in developing countries 15 times more healthy life years are lost per capita than in developed countries, with diarrhoea and acute lower respiratory infections among children being the largest contributors. The two principal environmental risk complexes for these diseases – drinking-water/sanitation/hygiene and indoor air pollution from solid fuel use – cause more than 2 million deaths annually.[1]

Known effective solutions include: ensuring that households have access to and use safe drinking-water and improved sanitation facilities; encouraging household water treatment; promoting the use of cleaner-burning stoves and switching from traditional solid fuels to cleaner modern fuels.[2,3] They are good value for money, yielding health-care savings, health-related productivity gains, time savings and environmental benefits that far exceed costs.

Delivery of environmental health interventions is, however, rarely administered or controlled directly by the health sector. Uncertainty about leadership and responsibilities across many public and private actors contributes to overall underperformance and inefficiency. This raises important questions about the most appropriate and effective roles for the health sector in environmental health policy development and implementation. We believe that, to date, attempts to answer these questions, conceptually or in practice, have been limited but will be essential if we want to make use of a significant opportunity to reduce the disease burden attributable to the environment, especially in developing countries.

Defining a health system

Some would assert that, given the multitude of health problems and the health workforce crisis in developing countries, the health system should focus solely on the provision of health care and preventative services such as vaccination. They might argue that economic development – through a better infrastructure, higher incomes and greater purchasing power – would eventually take care of the "unfinished agenda" of access to basic environmental health services and healthy living environments.

This restricted view contradicts WHO's definition of a health system:

"A health system consists of all organizations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities. A health system is therefore more than the pyramid of publicly owned facilities that deliver personal health services. … It includes inter-sectoral action by health staff …"[4]

Here, we argue that six specific health sector functions are critical in securing environmental health gains – both through direct health sector action and through working with other sectors (Fig. 1). These functions are: (i) ensuring that environmental health issues are adequately reflected in inter-sectoral policy development and implementation; (ii) setting and overseeing the implementation of health-protecting norms and regulations; (iii) incorporating environmental health in disease-specific and integrated health programmes; (iv) practising environmental health in health-care facilities; (v) preparing for and responding to outbreaks of environment-mediated diseases; and (vi) identifying and responding to emerging threats and opportunities for health.

It is evident from the WHO definition and historical experience, including the 19th century sanitary revolution, that the health system must be involved to accelerate the scaling-up and improved delivery of environmental health interventions.[5]

Multisectoral collaboration is complex and requires leadership and a clear consensus on and assignment of roles. Some of the critical health sector functions require direct action and leadership by that sector, while others can only be achieved in cooperation with other sectors. The execution of these functions can vary widely depending on the specific environmental health issue and between developing and developed countries.

Inter-sectoral policy

Altering traditional household energy practices and extending use of safe drinking-water and sanitation involves energy, water, development, environment and finance sectors. The "voice" of health – advocating through ministries of health, health professionals and non-governmental organizations – in arguing for improved policy, practice and financing, may secure substantial health investment outside health sector budget lines. For example, WHO involvement in the East African Community strategy to improve access to energy provided an opportunity to identify health concerns associated with energy alternatives pre-emptively and to ensure that chosen approaches actually deliver health gains in practice.[6] Health sector roles include

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(*Submitted: 2 October 2008 – Revised version received: 11 March 2009 – Accepted:24 March 2009 – Published online: 14 October 2009*)

building and maintaining expertise to track and influence major policies that impact on health; employing formal mechanisms for health impact assessment; and establishing effective multidisciplinary collaboration.

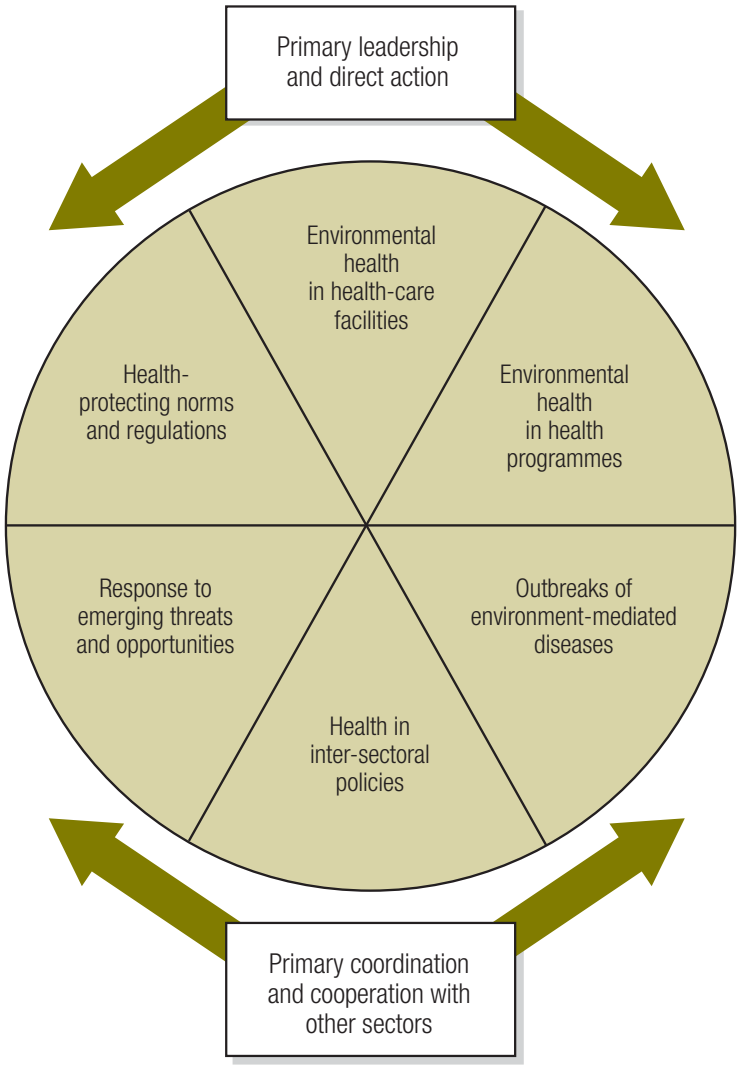
Norms and regulations

Experience shows that regulation and certification have a strong influence on the delivery of safe services, technologies and products in homes, workplaces, schools and public places. Water safety plans, as promoted in WHO guidelines,[7] are being progressively applied in countries as diverse as Nigeria, the Philippines and the United Kingdom. In Iceland, for example, drinking-water quality improved markedly following regulations introduced in 1995 that require water suppliers to implement water safety plans. Various WHO normative guidelines on environment and health provide a consistent basis for protecting public health from the harmful effects of pollutants, based on best available evidence and scientific consensus. Health sector roles include developing health-protecting standards and regulations appropriate to a country's social, economic and environmental circumstances, as well as monitoring their implementation and contribution to achieving population health gains.

Disease-specific and integrated programmes

Health professionals – generalists or specialists – are influential in raising awareness about health determinants, influencing attitudes and behaviours and generating demand for solutions. Under Indonesia's community Integrated Management of Childhood Illness programme, for example, every pregnant woman receives guidance on preventing coughs and diarrhoea by measures such as keeping children away from kitchen smoke, boiling water, hand-washing and using a toilet.[8] The local implementation of cross-cutting primary health care initiatives and of vertical disease programmes involves primary and community health workers, as well as social marketing campaigns through the media, schools and community organizations. Specific population groups may also be targeted, for example, HIV/AIDS programmes should reflect that HIV-positive individuals are more susceptible to environment-related disease

Fig. 1. **Health sector functions to secure environmental health**



yet may be denied access to latrines or water access points for fear of infection. Health sector roles include integrating environmental determinants into curricula for health professionals; incorporating environmental health messages and actions in health programmes; and working with partners in raising awareness in countries.

Health facilities

"First do no harm" is a long-recognized maxim in health care. Nevertheless, health-care facilities cause many preventable infections through inadequate management of water, waste, hygiene and ventilation.[9] This imposes a high cost on the health system and attracts political and media criticism. In Lima, Peru, better air exchange achieved through improvements in the natural ventilation in tuberculosis wards reduced the risk of disease transmission between patients, visitors and hospital staff.[10] Health sector roles include setting standards for health-care facilities; budgeting for structural improvements and capacity-building to encourage behavioural changes among staff; and enforcing compliance through an independent oversight function.

Outbreaks

Outbreaks of environment-mediated disease, such as diarrhoea, occur in developed and developing countries. An adequate response is critical for both disease containment and future prevention. The impact of an evolving understanding of the underlying determinants

of outbreaks on water management is well-recognized – from the removal of the handle from the Broad Street pump when John Snow recognized it was a source of cholera infection in 1854 to contemporary outbreaks of waterborne *Cryptosporidium* ssp. that have transformed policy and practice of disinfection and filtration in water supply.[11] Health sector roles include maintaining a nucleus of expertise to advise on and conduct outbreak investigation; testing, implementing and revising procedures in cooperation with other actors; and updating regulation and policy based on insights gained.

Threats and opportunities

Maximizing public health requires identifying and tackling new, emerging and re-emerging risks and pursuing innovation. Such "proactivity" implies outbreak investigation (e.g. the initial recognition of legionella), examination of the spatial distribution of disease (e.g. vector-borne diseases in relation to climate change), analysis of trends in diseases and their determinants over time (e.g. tuberculosis resurgence following the break-up of the Soviet Union) and recognition of the value of technological advancement. For example, the Indian development of a new generation of efficient gasifier stoves, which minimize pollutant emissions from biomass combustion at relatively low cost, is of direct relevance to health improvement and climate change mitigation.[12] Health sector roles include seeking evidence for causal associations between environmental factors and health, as well as assessing the potential values and harms of technology innovation and policy development.

Conclusion

Environmental health is a necessary element of the health system. We contend: that the six critical health sector functions identified here are essential in preventing a significant proportion of the burden of disease; that they apply to both developing and developed countries; and that they provide an under-used opportunity to translate the concept of primary health care into practice.

The health sector is well-placed to be leader and catalyst for complex multi-sectoral action. Mainstreaming health into other sectors' policies and programmes may be effective in tackling residual disease burdens that cannot be reduced through health sector action alone. In many cases, intervention costs are largely borne directly by households and are outweighed by the value of the benefits; the accompanying programme costs tend to be borne by sectors other than health. The required interventions therefore do not compete with health-care interventions for funding and thus represent a significant opportunity to mobilize additional resources for health.

We argue that the health sector needs to embrace each of these functions and roles; health professionals at all levels should engage more systematically and consistently in them; and active review of their implementation and impact should be undertaken as a matter of routine. ■

Acknowledgements

We thank Phil Callan, Majid Ezzati, Philipp Lambach and Martin Weber for their comments.

At the time of writing, Eva A Rehfuess and Jamie K Bartram were affiliated with the Department of Public Health and Environment at the World Health Organization, Geneva, Switzerland.

Competing interests: None declared.

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Integrating gender into HIV/AIDS programmes in the health sector: tool to improve responsiveness to women's needs

Publisher: World Health Organization; 2009.
ISBN: 978-92-4-1597197
Available from: http://www.who.int/gender/documents/gender_hiv_guidelines_en.pdf

Half of all people living with HIV/AIDS worldwide are female and in sub-Saharan Africa it is far more than half, especially among those aged 15–24. Women living with or widowed by HIV/AIDS are commonly spurned by their families, beaten, lose their property, forced to marry a brother-in-law or cast out of their communities. They are the caretakers in the household and held solely responsible for getting pregnant and protecting the babies they bear. Girls' and women's vulnerability to HIV is fuelled by endemic sexual coercion and violence; early and forced marriage to much older men; and lack of access to HIV information, sexuality education and reproductive health services.

Over a period of six years, WHO's Department of Gender, Women and Health invested in field tests in five countries and painstaking reviews by diverse practitioners to produce this manual. As a result, HIV/AIDS programme managers and service providers now have a jargon-free guide, focused on action, with enough information on inequalities between women and men to persuade readers to act. Four sections for health-care providers focus on selected services that are not addressed in the other 187 resources listed in the excellent reference section: HIV testing and counselling, prevention of mother-to-child transmission, HIV treatment and care, and home-based care and support. An opening section explains the role that gender inequalities play in women's vulnerability to HIV, in limiting women's access to and effective utilization of HIV/AIDS services, and the steps required to deliver and monitor programmes that will reduce these problems.

Each section of the manual, even the preface, is a gem, a terrific exposition of the investments that should be, but rarely are, made to produce a user-friendly tool. Although the authors suggest that the first section, on gender equality concepts, is most suitable for programme managers, service providers would also benefit from this clear and succinct clarification of "core" concepts. Each of the four service sections has examples of how to address the particular barriers, fears and challenges that women clients and patients are likely to face: at home, in the community and from health services. Examples from real life and materials from programmes provide additional energy to the already clear language and succinct presentations.

Two of the best parts of the manual are presented as annexes but no reader should miss these. Each is constructed as a checklist for managers and service providers, respectively, to assess their progress. These lists are an additional way of presenting and reinforcing the actions needed, broken into useful subactions and presented in sequence.

Sprinkled throughout the manual are special jewels, such as a clear and compelling list of reproductive rights interpreted for the HIV/AIDS context. There are also several pages on violence against women, its relationship to HIV exposure, its role in deterring effective HIV prevention, testing, disclosure and treatment, and examples of interventions specific to the health sector. This is also a compelling role-play for negotiating safer sex.

Annex 3 invites users of the manual to submit suggestions for the expected revision of the manual in five years. This reviewer has a few suggestions, without which HIV/AIDS will persist, especially for girls and women. First, each section needs action steps to assist readers to integrate into their work ways to help women cope with stigma and discrimination outside the health system. Second, each section should emphasize supervision and other means to hold managers and providers accountable for improved performance. Third, the section on prevention of mother-to-child transmission does not include treatment for the woman herself. The reference in the treatment section is brief and phrased in negative terms rather than with the strong affirmation it deserves. Further, while addressing family planning, this section does not address women's need and right to access safe, legal abortion should they want it. Fourth, references are inadequate on the importance of identifying and providing the comprehensive services women need, and to "linkages" between sexual and reproductive health services and HIV/AIDS programmes. All women need comprehensive reproductive health services. This has been agreed many times by governments since 1994 to include, at a minimum: family planning, safe abortion where legal, maternity care and diagnosis and treatment of sexually transmitted infections including HIV. Especially for women and young people, a paradigm shift is needed in HIV/AIDS programming to address HIV as a sexual and reproductive rights and health concern, including the services listed above as well as comprehensive sexuality education.

This manual should be widely introduced, not simply disseminated, by WHO and all others engaged in the delivery and funding of HIV/AIDS services in the health sector. ■

review by Adrienne Germain[a]

Health and development: toward a matrix approach

Editors: Anna Gatti & Andrea Boggio
Publisher: Palgrave Macmillan, Basingstoke, 2008
ISBN : 9781403947376; hardcover; 296 pages; £50.00

Interest in global health, the relationship between health and economic development, and the impact of globalization upon both of these, has risen rapidly up international and national agendas in recent years. This expansion of interest has both formal expression, such as the Millennium Development Goals, the Commission on Macroeconomics and Health, and the Framework Convention on Tobacco Control, and

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more informal expressions, through concerns and negotiations focusing upon pandemic influenza, the role of the food industry in nutrition-related chronic disease and the role of patent protection in access to essential medicines. These, and many other instances, serve to demonstrate that there is no such thing as national health or a national health system; in today's world, all health is global health.

This has led to a welcome concomitant increase in funding allocated to global health, both through traditional aid routes and increasingly through new initiatives, most notable perhaps being the Global Fund to Fight AIDS, Tuberculosis and Malaria. However, this increase has not been universally applauded and there have been criticisms, mostly focused upon the reinforcement of the "vertical" approach, emphasizing a disease-specific approach to securing health improvement. This has come at a time when many in the international health community were feeling that there had finally been a breakthrough in securing recognition that health improvement can only be achieved through strengthening of health systems more generally; the so called "horizontal" approach. More recently a consensus may be emerging that both approaches have strengths and weaknesses, and that synergies may be capitalized upon if both are pursued in tandem; simultaneously strengthening the health system while focusing upon those diseases that are the major burden to a country.

It is this tandem, or "diagonal", approach that Anna Gatti & Andrea Boggio emphasize in this book. In their introduction they emphasize this perspective and outline a matrix that seeks to combine both vertical and horizontal aspects to aid resource allocation. This is a novel and potentially illuminating means of categorizing interventions. The remainder of the book then comprises four sections written by a wide variety of authors internal and external to WHO. Part 1, on the global health arena, considers especially the role of WHO in global health. Part 2, on health and development looks in more detail at various perspectives on global health and development, including those of evolution, economics, law and ethics. Part 3, on global health and vulnerability, focuses on the experiences of the elderly, children and women. Part 4 considers the interrelation between specific disease and development, then shifts the focus to specific diseases of chronic illness, malaria, HIV/AIDS and tuberculosis. In the main, the book is relatively neutral in its presentation, provides a good deal of evidence – some of it new – and is authored by those with a good knowledge of their subjects. Certainly some of the perspectives by those working in or with international organizations provides interesting insights at times. The book is pervaded by the emphasis on building systems and capacities, rather than new technological discoveries, as the key to future health improvement. It is likely that readers interested in global health will find much that appeals and informs, and it is certainly a welcome addition to my bookshelf.

I read the book over a period of several weeks' travelling, something many readers may do, and the edited nature of the book lends itself very well to this style of reading as each chapter stands alone. However, once I had finished the final chapter, I found myself somewhat disappointed that there was no final section or chapter to turn to that deals with the performance of the matrix approach that was introduced at the beginning of the book. The book begins with the authors "propos[ing] a matrix as a tactical tool to be used to define optimal allocation of (scarce) resources" (p.xxiii). However, it is not made clear how the various chapters link to this, or how the analyses are informed by it, and the chapters themselves do not tend to make reference to this matrix. It is therefore disappointing to get to the end and find that there is no chapter to bring the book full circle and reflect upon the material in these chapters from this matrix perspective, or to offer a summary of the research and policy agenda's arising from them. This lack of emphasis on the matrix makes one wonder at the appropriateness of the subtitle of the book as, apart from a brief discussion in the introduction, the matrix approach does not appear and the book then becomes another collection – albeit an interesting collection – of papers with some specific views and opinions on globalization, health and development.

A further feature to bear in mind is that 12 of the 16 authors are current or ex-WHO staff and this is reflected in an often uncritical reflection upon the role and activities of WHO (perhaps the best example being the discussion in chapter 2). Although there have clearly been considerable successes achieved by the Organization over the past 60 years, this uncritical reflection of its role in the current global environment is a weakness, as there is considerable debate – internal and external to WHO – about the role the Organization will play in the next 60 years; for example vis-à-vis other international organizations, such as the World Trade Organization, concerning issues of trade and health. This emphasis of the role WHO does and should play seems critical to any discussion of the links between health and development.

In summary, this is a useful and accessible book that offers much benefit for those interested in global health. This is especially true of those who are active in the field in research and policy but it may also be of some value to graduate students, probably as an optional reading or reading of selective chapters. I only wish that the editors had taken that final step to conclude with something more on their proposed matrix! ■

review by Richard Smith[a]

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Bulletin of the World Health Organization

Volume 87, Number 11, November 2009, 805–884

This month's special theme:

▲ **Strengthening linkages between sexual and reproductive health and HIV**