



HIV/AIDS and water supply, sanitation and hygiene

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AIDS has become the most devastating global epidemic ever. Yet many secondary diseases from which patients suffer are preventable through better hygiene. When more treatment becomes available, patients can live longer and stay healthier.

A nearby and reliable supply of water, including for small-scale production and sanitary latrines, helps those infected stay healthy longer and able to continue work. They reduce the workload for caregivers and help preserve human dignity. Policy makers, programme planners and managers, donors and field workers need to treat HIV as a chronic disease and plan for better water supply, sanitation and hygiene to counteract the cruel impacts on people's day-to-day health, work, income and dignity.

Introduction - a real life story

Maria lives in a village in Limpopo Province, South Africa. She has developed AIDS and is now too ill and weak to do hard work. Her children fetch water when they return from school. They used to pay R5 a month for water from the standpipe, but can no longer afford to pay. Occasionally, she borrows money from her neighbours to buy water from a private borehole at 50 cents per 25 litres. Maria started a food garden, but is now too weak to work in it. She does not have a toilet, but uses her neighbour's when she is pressed. At other times she uses the bush. She would like to have her own toilet as this would make things easier for her (Kgalushi et al., 2003)

The facts

HIV/AIDS, the most devastating global epidemic ever, is a human and developmental drama. In the year 2002 alone, five million more people were infected with HIV. Over 42 million people, or more than the population of Poland already live with HIV/AIDS, 46% of them women, 46% men and 8% children of 0-14 years of age. Another 21.8 million people, a number equal to the population of Romania have died, 41% women, 39% men and 20% children.

Sub-Saharan Africa has the highest number of HIV positive individuals (29.4 million people), followed by South and South-East Asia (6 million). In North America there are 980,000 people living with HIV/AIDS, 570,000 in Western Europe and 1.2 million in Eastern Europe and Central Asia. The number of HIV positive individuals in Australia and New Zealand has remained constant since 2001 (15,000 people). In Latin America and the Caribbean, the figure is 1.5 million and 440,000 respectively. East Asia and the Pacific have 1.2 million people living with HIV/AIDS and North Africa and the Middle East 550,000 (UNAIDS, 2002 in Eldis, 2003, and Figure 1).

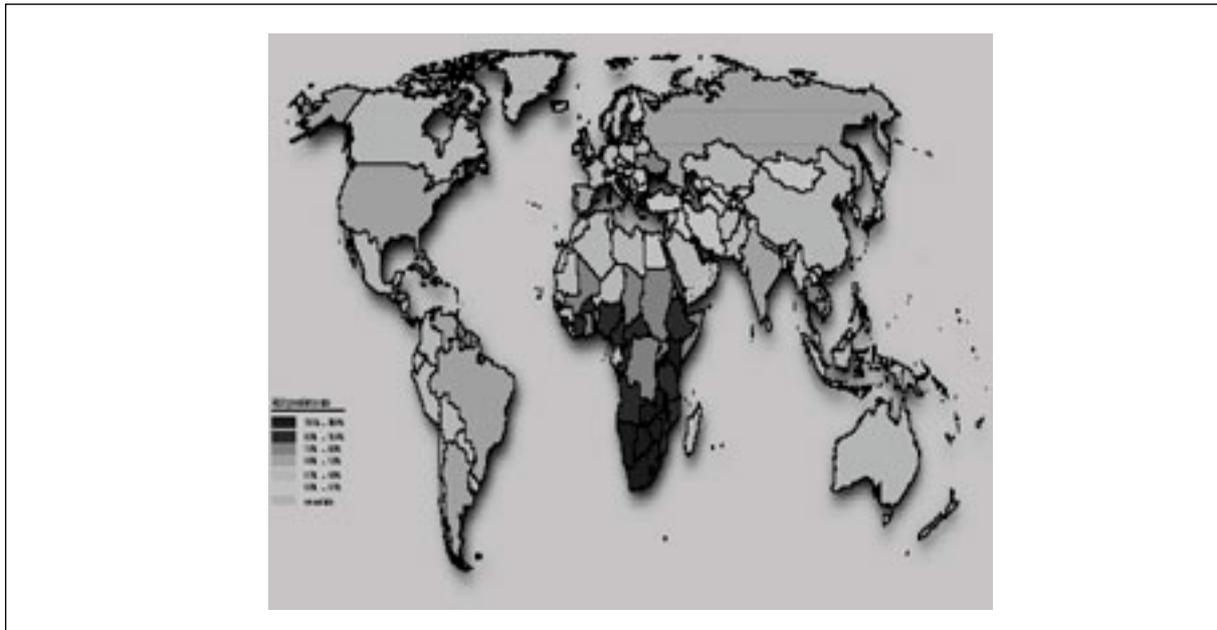


Figure 1. Fig. 1 Areas with low, middle and high prevalence at end 2001

Source: UNAIDS

New patients are infected with the human immunodeficiency virus (HIV) through unsafe blood transfusions, sharing of needles and syringes, unprotected sexual intercourse and during birth and breastfeeding. Over time, they develop AIDS (Acquired Immune Deficiency Syndrome). AIDS itself has few symptoms, but it makes people susceptible to other infections (also called opportunist infections), such as diarrhoea, malaria and tuberculosis. At least one in every three patients with HIV develops tuberculosis (French and Gilks, 1999; Gorkom, 2002, Kamminga and Wegelin, 2003).

HIV/AIDS becoming a chronic disease

As yet, there is no cure for HIV/AIDS and governments cannot prevent transmission through vaccination. Prevention depends on people's own sexual behaviour and that of others. In Uganda, HIV prevalence has dropped from a national average of 18% to 6.5 % (some under-reporting possible). The drop is due to effective behaviour change strategies for adolescents and an integrated approach to prevention and mitigation of impact (Kibuka, 2003 and Uganda Aids Commission <http://www.aidsuganda.org>)

New medicines have been developed which allow infected persons to live longer with a higher quality of life. Although anti-retroviral treatment is effective and its cost constantly being reduced, its availability on a large scale requires massive intervention in terms of training, logistics and funding as well as strategies to decrease stigma and support mechanisms for life-long adherence. At the end of 2002, only an estimated 300,000 people had access to HIV-related medicines and about one-third of them lived in one country, Brazil. People getting treatment form only about 5% of those in need, against 100% access in high-income countries. Access in sub-Saharan Africa is only 1% (UNAIDS, 2002).

On August 30, 2003, negotiations in the World Trade Organization led to an agreement to lift some patent rights of the big multi-nationals that produce HIV/AIDS anti-retroviral medicines. Countries can now import or manufacture cheaper medicines as long as they only use them locally.

More susceptible to water-related diseases

Men, women and children with HIV/AIDS infection are highly susceptible to other diseases. Most of these are related to poor water supply, sanitation and hygiene. Diarrhoeas and various types of skin diseases are common secondary (or 'opportunistic') infections. The risk of getting malaria is also greater, and is worsened by poor drainage creating extra mosquito breeding places in and around communities.

According to WHO estimates, HIV/AIDS killed over 3 million people in 2002, malaria over 1 million and TB 1.9 million. When infected people have better access to treatment and basic services and hygiene education, they can live longer and continue to help their family and nation. Unfortunately, 95% of those infected do not know about their being HIV positive and most do not want to get tested because of stigma and lack of access to treatment. People can stay healthy for a very long time if they ensure that they live a healthy life and treat illnesses immediately.

The period of latency on average lasts about 7-10 years, depending on the type of HIV, access to health and reproductive health services, poverty and other issues (if people do not know they are infected they can easily get reinfected and then their immune system breaks down faster). In Uganda, for example, the Medical Research Council reported a post-infection life expectancy of 10 years, against an average of 13 years in the countries of the North. Out of these ten years, patients suffered from various illnesses for nearly eight years (Kayizzi, 2001).

High demands on family care

During their years of illness, AIDS patients are mainly cared for by relatives, friends and neighbours (home-based care). Easy access to a safe, reliable and sufficient water supply and basic sanitation in this stage is essential. For the caregivers, it greatly reduces the extra burdens which they already carry. For the patients, it means human dignity and basic access to personal hygiene. For example, over half of patients suffering from HIV/AIDS have chronic diarrhoea. Having a latrine nearby is then crucial. For mothers who are HIV positive, the risk of transmitting the virus through breast milk is 1:3. Irrespective of whether they can, or for various reasons cannot replace breastfeeding by bottle feeding, clean water is important for the babies' care.

Need for water for productive uses

Within households, water is also needed for productive uses, to increase food security and maintain nutrition levels. This helps patients to stay healthy for a longer time and keeps the household's income from falling so rapidly and deeply. Access to a plot and water for staple crops, vegetables and fruit for home consumption and marketing are especially crucial for poor families.

Service delivery

So far, HIV/AIDS has been treated as an epidemic rather than as (also) a chronic disease. The emphasis is on the medical aspects - treatment and prevention - and, to a very limited degree, on the socio-economic impacts. Neither the UN organizations nor country governments have looked at the implications for the water sector. Yet, the need for, and impact on, water supply and sanitation are great. Over one billion people lack a minimum supply of safe water and 2.4 billion people have no proper sanitation and many of them suffer from HIV/AIDS.

Service delivery is affected by situations within water and sanitation service organisations and by conditions on the ground. Within high prevalence countries, staff infection rates can be as high as 30%. Eng. Samuel Wambua, the Executive Director of NETWAS International said at the 13th Regional Water and Sanitation Seminar in Nairobi in September 2001 that "...a scenario may arise when we will have few customers to provide water for, few effective service providers, few to provide labour, few experts to provide management and technical support in the sector" (IRC, 2002).

For internal management, this has implications for sick and compassionate leave and funeral expenses, staff insurance and benefits, recruitment, promotion and training. Illness, stress and financial pressures bring absenteeism and loss of productivity. Service provision is affected as illness and loss of staff leads to slowdowns in planning and construction. There is also less trained and experienced staff for operation, maintenance and repair and quality control. Loss of staff also means less training of communities for operation and maintenance and less hygiene education.

Within the communities, people have less time for local participation and management and less money to pay for services. The basic principles of developing sustainable community water supply and sanitation are eroded, when those with the disease and their caretakers are not able to participate in planning, decision making and implementation and cannot apply pressure to ensure that their special needs are met (Wegelin et al., 2003).

Need for coping strategies in the water sector

So far, the water and sanitation sector has paid little or no attention to the actual and future impacts of HIV/AIDS on the financial, social and economic feasibility and sustainability of water supply and sanitation systems. Due to the stigma associated with HIV/AIDS, few organisations have developed an internal HIV/AIDS policy and created an atmosphere of openness, prevention and coping. Such a policy would for example address mobility of staff, number of nights away in the field and postings away from families (Wegelin et al, 2003). Other measures would relate to information, health education, counselling, social security measures and support for treatment.

More robust water supplies, water treatment and sanitation systems requiring less (and less complex) maintenance and repairs, and more attention to home systems, including home treatment of drinking water, would make communities and households less dependent on outside support. Basic sanitation and enough water nearby for personal hygiene is crucial as 50% of patients suffer from chronic diarrhoea.

Where households have no safe water, or the supply is intermittent and breakdowns are long, SODIS, or solar disinfection of less safe water, is suitable for household use. A transparent container such as a plastic bottle is filled with water from a nearby source with a lower water quality and closed. The caretaker places the container in strong sunlight. This will kill most bacteria when the water is exposed for a period of 4-6 hours in full sunlight, or an entire day when the sky is overcast. The water is disinfected by UV rays, and in addition reaches a temperature of up to 50-60 degrees so it needs to cool down before use (<http://www.sodis.ch/>) (WHO, 2001)

Recognizing hygiene in health education

Although some material exists (FAO, 2002), health education is not yet addressing the chronic disease effects of HIV/AIDS infections. A case study in Limpopo province, South Africa, showed a lack of adjustment not only of water supply and sanitation services, but also of hygiene education. The participating focus groups of caregivers and people living with HIV/AIDS identified good food and exercise as important ways of staying healthy longer. There were, however, no concerted efforts

from the departments of water, health, agriculture and the communities to address production around homes and/or waterpoints for better nutrition. Poor sanitation was another problem that was insufficiently addressed.

The households in the case study saw drinking river water as a potential risk for catching cholera, but there was little awareness of the importance of personal and domestic hygiene behaviour for the patients' health. The local health educators focused on the prevention of HIV/AIDS but did not address secondary diseases stemming from poor quality or inadequate water supply, hygiene and sanitation. (Kgalushi et al, 2003).

Ways forward

Safe water, sanitation and hygiene are basic needs and human rights. They help those affected by HIV/AIDS to remain in good health for longer, facilitate care for ill patients and increase their dignity. Programmes and policy makers can give higher priority for water supply, sanitation and hygiene promotion to areas with a high incidence of the disease.

Hygiene education needs to be integrated in the training given to home care volunteers and their trainers in order to ensure safe water handling practices.

As most caregivers are women, their influence on planning and implementation of service provision is more necessary than ever. Because often very young and very old women take over much of the water and sanitation related tasks, both hygiene education and technology selection may have to be adapted to suit their requirements.

Community based approaches are known to enhance sustainability and use. They can at the same time function as an entrance to promote community-based prevention and mitigation activities. The principles are the same, the issue at hand more sensitive. It requires well-trained, motivated and non-stigmatising facilitators. Experience with participatory methods exists and can be built on.

Box 1. Programming for inter-linkage

The Water, Sanitation and Hygiene Promotion Programme of UNICEF-Mozambique addresses HIV/AIDS through improved access to water supplies, improved sanitation and promotion of good hygiene practices, focussing on communities in districts with a high HIV prevalence rate. These components will reduce incidence of opportunistic diseases and reduce the burden on caretakers of sick people by bringing the water supplies closer to the homes.

<http://www.unicef.org/mozambique/hiv.htm>

Water agencies are affected by the disease. This necessitates the development of policies and strategies within the agencies and for the sector. Agencies need an internal HIV/AIDS policy and strategy to mitigate impact on the agency and the development of a strategy to integrate HIV/AIDS in service provision.

In the sector, facilities are needed that require less frequent maintenance and repairs by outsiders and limited time and money from households to keep them going. Development of low-cost home treatment is an alternative.

A poverty alleviation framework can ensure that the socio-economic and equity aspects that play a role in water, sanitation and HIV/AIDS are addressed. As treatment becomes cheaper and more available, HIV becomes a chronic disease requiring a multi-pronged strategy for keeping those infected in good health and able to work. This includes more attention to personal hygiene and the means for hygiene preservation: access to adequate and safe water, good sanitation and hygiene education.

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