



nam www.aidsmap.com

HIV and AIDS Treatment in Practice

Caring for the caregivers in the face of HIV and TB

A GRAPH THAT SHOWS NO OF TB CASES BY TYPE AND THEIR TREATMENT OUT COME OF A/T/IK OF THE YEAR 2012



ATB nurse in front of a graph showing TB treatment outcomes in her region.
Lung Health
Image Library/
Jan van den Hombergh

Introduction

As HIV testing and ART programmes are scaled up, healthcare workers will be called on to respond to a range of clinical challenges in ways that often go beyond simply treating HIV.

In recognition of this need, HIV and AIDS Treatment in Practice (HATIP) is producing a series of regular clinical reviews focusing on the management of the spectrum of clinical conditions (HIV-related conditions, opportunistic infections, malignancies, drug-related complications and co-morbidities) that affect adults and children with HIV in sub-Saharan Africa. But our goal is not only to present the most current information from the medical journals, conferences and leading experts about how to manage these conditions in resource-constrained settings, but to discuss how to respond to these challenges with an integrated palliative care approach.

Palliative care is commonly thought to pertain to pain and symptom relief at the end of life; and while it should include this, palliative care is really about improving the quality of life for people with HIV and their families; and it should begin at diagnosis.

Effective preventive care and treatment, including ART, are essential components of quality palliative care. But palliative care goes beyond that: it considers the physical, psycho-social, economic and spiritual impact of HIV and related illnesses on individuals and their families, and requires the early identification and impeccable assessment of suffering caused by different HIV-related clinical conditions and mitigation of suffering by providing effective pain management, psychosocial support and when necessary, bereavement counselling.

Each clinical review tries to list resources and identify support mechanisms and systems to help people with HIV live as well and actively as possible, and to help them cope with the long consequences that sometimes result from delayed or inadequate treatment of some HIV-related complications.

Theo Smart, Editor (HATIP)

HATIP is a regular electronic newsletter for healthcare workers and community-based organisations on HIV treatment in resource-limited settings. HATIP is produced by NAM.

All the clinical reviews in the series are available at www.aidsmap.com/hatip. The series includes the following:

➔ **HATIP #89** provides an overview of how quality palliative and preventive care must be part of the basic package of care offered to all people with HIV and their families.

➔ **HATIP #119** addresses the often painful oesophageal problems that exert profound effects on quality of life and often lead to malnutrition.

➔ **HATIP #98** looks at the diagnosis and management of the various causes of meningitis – which can cause debilitating long-term consequences that few programmes address adequately.

➔ **HATIPs #124, 126, and 127** are a series on tuberculosis in children, a much-neglected problem that can be particularly difficult to manage in children with HIV.

➔ **HATIP #102** explores the management of Kaposi's sarcoma in the settings where there is limited capacity to properly diagnose or treat cancer of any kind.

➔ **HATIP #128 and 129** are devoted to the health and safety of our healthcare workers, exploring the factors that endanger their emotional, psychological and physical wellbeing, potential interventions that could be put in place to help protect them from harm, and how to most effectively provide access to high quality palliative care (including HIV and TB treatment) to healthcare workers where and when they need it.

➔ **HATIP #108** is a two-part issue on how HIV complicates the management of childhood pneumonia, the biggest killer of children worldwide.



Caring for the caregivers in the face of HIV and TB

a clinical review



Caregiver explains ARV treatment to a child, Swaziland. Jill Granberg / Flickr



Healthcare workers bear the brunt of dealing with HIV – but what are its effects on them, and who looks after our healthcare workers? In the first of two articles published in *HIV & AIDS Treatment in Practice* in January 2009, *Theo Smart* looks at the challenges facing healthcare workers.

Why do we need to care for the caregivers?

Last year, HATIP ran two articles, on how programmes need to quickly scale up the production of healthcare workers, and how task shifting can help address some aspects of the healthcare worker shortage in resource-limited settings.

But while much has been written about healthcare workers migrating to settings where they can get better pay, the healthcare staff attrition in resource-limited settings can actually be due to a variety of factors.^{1,2,3} Many work in grim and unsafe working conditions for inadequate pay. Eventually some quit their jobs because of overwhelming workloads and responsibilities undertaken for less than a living wage; or they have unsupportive or sometimes abusive management, and a lack of opportunities for further professional development.⁴

Many healthcare workers are suffering from occupational stress – the feeling of being unable to cope with the demands or expectations of the job. Some feel that they have been inadequately trained or supervised for new tasks, or that they are unable to perform their jobs well when working in inadequate and often deteriorating facilities that are short of staff, necessary equipment and essential supplies (including, notably, gloves and other protective clothing).^{5,6,7} Consequently, many are also concerned about workplace safety (occupational exposure to HIV and TB) – and worry about job security especially if they should become HIV-infected.

Finally, many healthcare workers are falling ill and dying from TB or HIV-related illnesses, with morbidity and mortality accounting for over 60% of attrition in some settings.^{8,9}

“One of the toughest things we face around this issue at Edendale Hospital is that there are notices in the hospital hallways every month – Sister so and so RIP Memorial service. There are constantly funeral notices from hospital staff,” Dr Krista Dong told HATIP. She described one recent example of a leader of a local NGO working in HIV education, prevention and positive living who died from AIDS a couple of months ago, not on treatment. “He tested, was positive and died two weeks

later. There is an epidemic of preventable death not just amongst healthcare workers, but in persons who are leaders in HIV programmes.”

Doctors are affected too. In fact, one study of 77 doctors who graduated in 1984 from Makerere University in Kampala, Uganda found that 11 had died of AIDS by 2004, and that six had committed suicide (at least five of these cases were believed to be related to a known or suspected HIV diagnosis).¹⁰

And even for healthcare workers who stay in the workforce, poor health and stress affect the quality of care that they provide. According to a recent survey of nurses in Swaziland, health workers believed that colleagues missed an average of 10 days per month due to their own or a family member’s HIV disease.¹¹

Clearly much more needs to be done to keep our healthcare workers healthy, happy and productive members of the health system.

This clinical review is devoted to the health and safety of our healthcare workers, exploring the factors that endanger their emotional, psychological and physical wellbeing, potential interventions that could be put in place to help protect them from harm, and how to most effectively provide access to high quality palliative care (including HIV and TB treatment) to healthcare workers where and when they need it.

This should begin with occupational stress and other experiences affecting the mental health of healthcare workers in the workplace – including stigma – because it has direct bearing on how they perceive workplace safety, respond to the interventions designed to protect them, and how they are most likely to access care.

The burden of occupational stress and burnout among healthcare staff

It isn’t necessary to tell the readership of HATIP that the healthcare profession is inherently stressful or that the HIV/AIDS epidemic has exacerbated the demands placed on healthcare workers.

But the severity and intensity of the HIV epidemic is often perceived as overwhelming by healthcare workers, especially since it involves whole families (including children) who are often suffering severe financial hardships and other problems at the same time.¹² According to a research project involving 20 AIDS service organisations in Canada, it is “the relentless complexity of working in HIV/AIDS” that makes it so difficult to retain an effective workforce when staff members have to continually deal with communication problems, fatigue, depression, unresolved grief, high staff turnover and burnout.¹³ Similar observations have been reported in a number of surveys of health workers in Africa.^{14,15,16} While some of these reports come from surveys and interviews rather than rigorously controlled studies, the reports nevertheless show consistent trends.

“Occupational burnout and its manifestations (e.g. despondency, lack of capacity to give compassionate care, development of a negative self-image and the belief that it is not possible to make a difference) must be prevented at all costs,” wrote Professor Alta Van Dyk of the University of South Africa (UNISA). She conducted a study in 243 caregivers about to start a counselling course on HIV/AIDS at the school, asking them to fill out a semi-structured questionnaire about the stress factors affecting healthcare workers involved in HIV/AIDS-related care, their symptoms of occupational

“ Caregivers battle with bereavement overload, over-identify with their patients, and feel largely unsupported by their employers, families and friends ”

stress, and what type of employer or organisational support were available to them, and then to write short essays describing their own experiences and personal coping mechanisms. Prof Van Dyk pointed out that the participants were a 'convenience sample' of caregivers and since they were motivated enough to take the course and "thus choosing to empower themselves with more knowledge to cope with HIV or AIDS in their workplace" they may not be representative of healthcare workers in general.

Even so the key themes that emerged ring true: healthcare workers "battle with bereavement overload, over-identify with their patients, fear occupational exposure to HIV, and find it difficult to cope with their own and patients' stigmatisation and confidentiality issues. The caregivers generally believed that they had not been adequately trained to offer HIV-related counselling; they largely felt unsupported by their employers, family and friends; and they were frequently angry about slow government processes and misleading health messages." Of note, there was no relationship between the stress factors and any of the socio-

demographic variables of the caregivers, "indicating that the experience of stressors in the HIV/AIDS field was inherent in the working context," she wrote. However, younger caregivers were more likely to report stress-related symptoms ($r_s = -0.135, p < 0.05$).

Several observations stand out in the study – one is that more than half of the caregivers found it difficult to keep a professional distance from their clients/patients, and about four out of five (especially the nurses) "confessed that they felt the need to 'rescue' or save their clients/patients, often expressing their frustration in essay form at not being able to do so." Prof Van Dyk noted that many studies have reported that caregivers who do not establish an appropriate emotional distance eventually suffered from severe occupational stress and burnout.

According to an UNAIDS report on managing stress in HIV/AIDS caregivers, "burnout is not an 'event' but a process in which everyday stresses and anxieties that are not addressed gradually undermine the carer's mental and physical health, so that eventually caregiving and personal relationships suffer."¹⁷

Since burnout occurs gradually, caregivers may keep working until their wellbeing and job performance hit rock bottom.¹⁸ Thus, they may suffer from "compassion fatigue" for a prolonged period, during which time their patients may be neglected, treated in a detached, mechanical fashion; or even subjected to mental/physical abuse.¹⁹ In the UNISA study, about 21% of the healthcare workers said that they no longer cared what happened to their patients.

Nurses at a training seminar in Kampala.
Lung Health Image Library / Gary Hampton



Case study

Prudence called in sick to work today.

She has worked as a nurse for a few years in the district hospital serving the area where she was born. At first, she was excited about her job and eager to give something back to her community; but it has proved more complicated than she expected. One challenge she has found is that she knows quite a few of the people coming in for care, including several members of her extended family who are HIV-infected – but she has had to keep this information to herself. For instance, she held her tongue when a man living with her cousin started taking antiretroviral therapy (ART). He quit taking it shortly afterwards, and tried to tell her that medicinal herbs from a traditional healer had cured him. He died not long after that. Since then, she has found herself growing increasingly annoyed with patients who are reluctant to start treatment, or who have adherence problems – especially if she knows them or their families.

Each day is an emotional rollercoaster. Although she has seen ART restore health to many patients, she has also seen many who only came for care when they were gravely ill, or who came into the clinic just once or twice and then simply never came back. Many people are still dying – and are never visited by their families. The clinic is always busy, with too few staff to keep up with the workload, and her responsibilities just keep increasing.

At the end of one particularly exhausting day, Prudence pricked herself putting the cap back onto

a needle after giving a patient an injection. It seemed minor at the time and so she didn't report the needle stick injury (NSI) to anyone or try to access post-exposure prophylaxis (PEP). But later it began to worry her and she had some sleepless nights. She began to imagine symptoms of HIV and sometimes she would check to see whether her lymph nodes were swollen. Avoiding the testing facilities at her own hospital, she eventually went to a mobile clinic and tested negative. She still worries about contracting HIV in the workplace, though as a woman living in southern Africa, she is probably at greater risk of acquiring it within the community.

However HIV isn't the only health danger Prudence should be concerned about: for instance, hepatitis B virus also poses a risk, and many health workers in resource-limited settings have never been vaccinated. But the greatest threat of all may be TB. Prudence has attended to many patients who have TB, some probably multidrug-resistant, and several of her coworkers have come down with the illness. She's decided just not to think about it too much.

Prudence could have one of these serious illnesses today – or she could just be exhausted, stressed out and simply sick of her job. Either way, the health system could be in danger of losing one of its most essential resources – one of its healthcare workers.

“ Since burnout occurs gradually, caregivers may keep working until their wellbeing and job performance hit rock bottom. Many people who are truly burnt out have not found healthy coping mechanisms ”

Even though most of the participants in the UNISA study reported using 'positive' mechanisms to cope with stress, many people who are truly burnt-out have not found healthy coping mechanisms. Having worked in the field since the early 1990s, this writer has personally observed many cases of severe stress and/or burnout among caregivers that have led to self-destructive behaviour, including alcoholism and drug dependency and more than a few cases of community-acquired HIV.

Yes, but won't the ART rollout make everything better?

It should be noted that many of these surveys including the UNISA study were performed before the rollout of ART was in full swing – and it has been suggested that the ability to improve outcomes and save the lives of more patients could go a long way towards tackling the sense of helplessness and feelings of despair confronting HIV/AIDS. Indeed, in one analysis of PALS Plus (Practical Approach to Lung health and HIV/AIDS in South Africa), nurses who were working in the primary healthcare clinics and responsible for most of the care delivered to AIDS patients, found new hope and

motivation in the ART rollout – and shrugged off their increasing clinical responsibilities.²⁰

That's fantastic, but there's a chance that the novelty of ART could wear off after a while. It is worth noting that the Canadian survey of AIDS service organisations mentioned earlier took place well after the introduction of ART in that country, but stress and burnout were persistent. Although Prof Van Dyk reported that it was "the intensity rather than the chronicity of HIV/AIDS" that was most stressful to healthcare workers in her study, at the time HIV wasn't really such a chronic condition in South Africa.

With ART, HIV care is for the long haul, and therefore, so is HIV disease. According to O'Neill and McKinney in *A Clinical Guide to Supportive and Palliative Care*, in the United States, "the prolongation of the disease course, uncertainty about overall prognosis, and a "roller coaster" pattern of repeated exacerbations and remissions in later stages of HIV disease have intensified the emotional and physical demands of caregiving."²¹

In these circumstances, O'Neill and McKinney note that caregivers often have "little time or energy for self-care," and the effects of neglecting nutrition, exercise, socialisation, and sleep are cumulative, potentially leading to very real physical ailments not to mention problems with relationships and family. Furthermore, healthcare workers who experience "work overload and interpersonal conflict over an extended period of time are particularly vulnerable to burnout."

So despite initial programme successes in the ART rollout, a few years down the road, it may grow increasingly difficult for healthcare workers, who have

been working under 'emergency response conditions,' to continue delivering quality care for a chronic disease to ever-increasing numbers of patients.

Health systems and programmes must make plans to support the mental health of the health workforce *over the long term*.

Stigma

Stigma merits special attention since it can have a bearing on how healthcare workers deal with occupational exposure. Healthcare workers not only observe stigma, they experience it first hand and often internalise it.

The healthcare workers in the UNISA cohort observed many patients being rejected by their families: *"Some are being isolated", one wrote, "they are given their own eating utensils and may not watch TV with others, especially when they are coughing"*.

Almost a third of the participants in the UNISA cohort were even afraid that people in their communities would stigmatise them because they worked with AIDS patients. One home-based care nurse wrote that, in the community where she worked, she was known as *'the AIDS sister who should be avoided'*. And in another study, one nurse reported trying to keep her profession a secret:

*"I can't dare to wear my nurse's uniform when I go home. Before leaving the hospital, I remove my epaulettes, so that people can think I work for Pick 'n Pay [a food chain store] or something. It is risky these days to say that you are a nurse. People think because we work with HIV-positive people, that we are contaminated or something."*²²

Fears of contracting HIV caused problems at home.²³ "Some nurses confessed that they did not tell their husbands when they had sustained needlestick injuries because the husbands then refused to have sex with them (and in one case, he would *'visit girlfriends'*). They could also not share their (often irrational) fears with their partners, *'because they freak out completely',*" Prof Van Dyk wrote.

Some healthcare workers believe that HIV would cause them problems in the workplace as well.

"If I look at what is happening to my poor patients who disclose their status, I will never ever tell anybody if I am infected – not even my colleagues at the hospital," said one of the participants in the UNISA study.

Indeed, according to a more recent and even larger survey, more than 40% of 910 healthcare workers interviewed thought that coworkers would laugh behind their back, or think that they were immoral if they knew they were positive.²⁴ Dr Liz Corbett presented findings from the survey, conducted to inform the "Treat" component of Treat, Train and Retain (TTR), WHO's plan for AIDS and the health workforce, at the Union World Lung Conference in Paris last October. The study involved randomly selected health worker interviews from 50 different facilities (six randomly selected facilities, as well as four selected best practice facilities from each country) in Ethiopia, Kenya, Malawi, Mozambique and Zimbabwe.

Participants anticipated being stigmatised much more if they had HIV than if they had TB – although 63% of health workers said that if they had TB, their coworkers would consider them to be HIV-positive.

Almost 70% of healthcare workers interviewed thought that they would be discriminated against

in terms of having fewer training and promotion opportunities if their employer were to learn that they were HIV-positive. Notably, all of these countries have national policies against HIV discrimination at the workplace – but only 36% of facilities had any written guidelines or even memos about it, and only 20% of healthcare workers were aware of the policy. 63% did believe that they would be able to report HIV discrimination without fear of reprisal.

Notably, in the recent survey from Swaziland mentioned earlier in the article, healthcare workers also reported fearing that their patients would not respect them or be willing to be treated by them if they knew that they were HIV-infected.²⁵ They "expressed a sense of failure and embarrassment for contracting an infection that they felt they should have had the knowledge to avoid," wrote the study's authors.

This form of internalised stigma is more difficult to assess but is an additional barrier to care, according to a recent paper by Eubel et al. in JID. They quote Justice Edwin Cameron who defined internalised stigma as fear, self-disablement, and feelings of contamination, self-rejection and self-loathing that results in inaction, postponement, delay, denial and death.²⁶ In other words, delayed health-seeking behaviour. "The effects of this internal stigma, when added to the burnout experienced by many health care workers, contribute to enormous barriers for health care workers accessing HIV care. The fear of disclosure to colleagues within the small community atmosphere of a hospital, if confidentiality is not protected, can make the barriers seem insurmountable," they wrote.²⁷

But HIV testing seems to be the first and most significant stumbling block.

““ How to provide regular HIV testing at the workplace is key to unlocking HIV and TB prevention and care in health workers – concerns around privacy and confidentiality are really paramount ““

"Many caregivers in the study said they preferred to live with the uncertainty of their HIV status than seek counselling or testing," Prof Van Dyk wrote.

In the TTR survey, 70% of the 910 participants had had at least one HIV test – but most had privately tested themselves.

"Most of them had last tested more than a year ago and not through their own routine services," said Dr Corbett. "The issue of how to provide regular HIV testing at the workplace in an acceptable fashion, is really the key to unlocking HIV and TB prevention and care in health workers in these countries – concerns around privacy and confidentiality are really paramount."

The risk and burden of HIV/AIDS among healthcare workers

Possibly because many healthcare workers have been unwilling to get tested for HIV at their workplace or are not open about their results, it is somewhat hard to find



A suspected TB patient provides a sputum sample, Uganda.

Lung Health
Image Library/
Gary Hampton

reliable figures of how many healthcare workers are HIV-infected.

In the US, the Centers for Disease Control has reported that as of December 31, 2000, 24,844 adults reported with AIDS in that country had a history of employment in healthcare.²⁸ These cases represented 5.1% of the 486,826 AIDS cases reported to CDC for whom occupational information was known.

Notably, in the US, there were only 57 cases where HIV transmission was confirmed to have occurred following an occupational exposure and 139 cases where there was no other reported risk factor for HIV besides a history of occupational exposure to blood, body fluids, or HIV-infected laboratory material.

The average risk of infection due to a single percutaneous injury is estimated to be about 3 in 1000, which is higher than the risk after sexual exposure.²⁹ Globally, it has been estimated that a little over 4% of the HIV infections among healthcare workers are due to occupational exposure related to injuries with sharps.³⁰ Although the majority of HIV transmission due to occupational exposure is believed to occur in sub-Saharan Africa (more on that later), that still means that the vast majority of HIV infections among healthcare workers are community acquired.

But are healthcare workers more or less likely to be HIV-infected than the general population? The data are mixed.

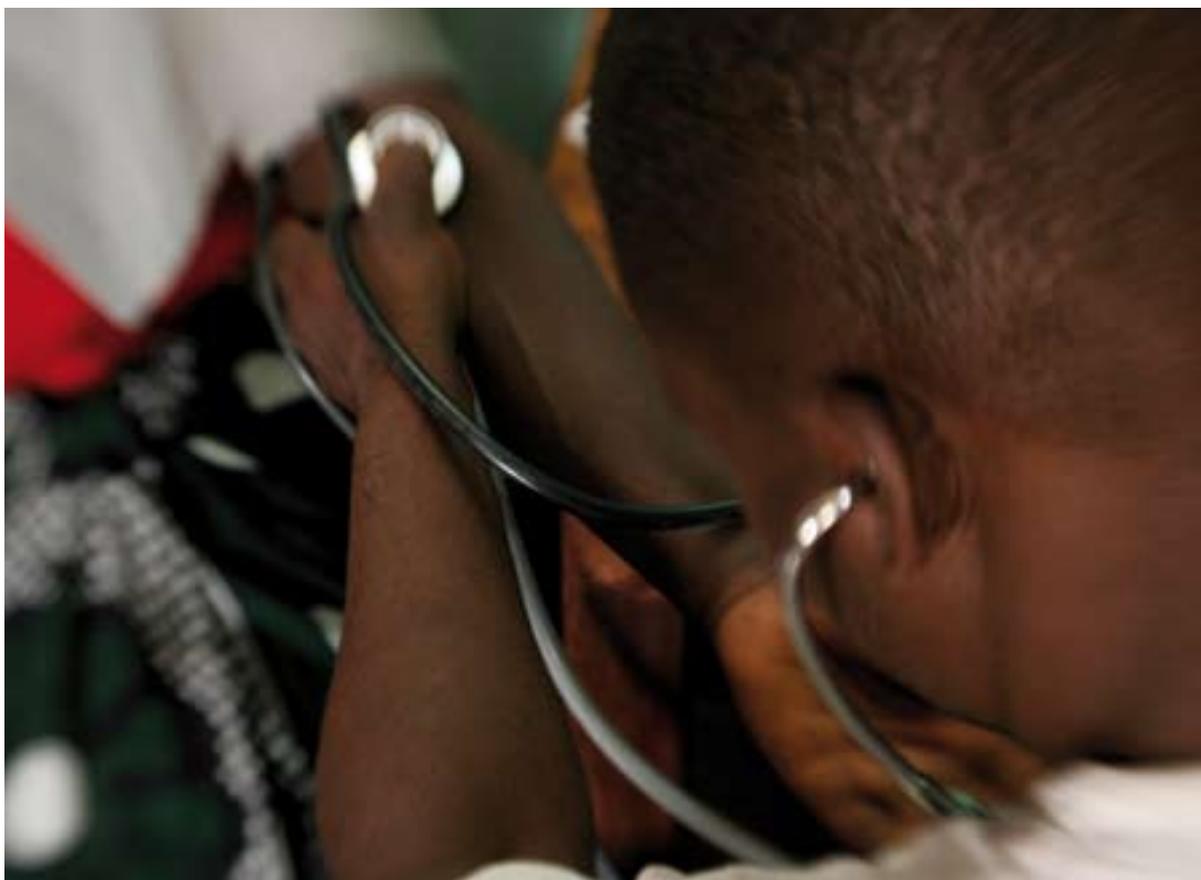
In 2002, the Human Sciences Research Council performed a survey involving 595 respondents from public/private hospitals in four provinces (Mpumalanga,

Northwest Province, KwaZulu Natal and the Free State) who were screened for HIV using an OraSure HIV test.³¹ The seroprevalence rate overall was 15.7% (95% (CI): 12.2-19.9%) – virtually the same as the 2002 seroprevalence rate among the general adult population aged between 15 to 49 years old in South Africa (~15.5%).

While the confidence intervals overlapped, there were some trends that could be worth noting. For instance, there was a slightly higher prevalence at primary health facilities and clinics (17.5%) than at hospitals (15.3%). There were differences by province, ranging from a seroprevalence of 9.6% in the Free State to 19.7% in the Northwest Province. The prevalence differed substantially between non-professional (20.3%) and professional health workers (13.7%). And finally, there was a higher seroprevalence in the younger age group (20% among 18 to 35 year olds) versus 16.6% in the 36 to 45 year old age group.

An even larger HIV surveillance study was performed a few years later in 1493 staff at Coronation and Helen Joseph Hospitals in Johannesburg, including medical doctors, allied staff, nurses, student nurses and general assistants.³² The prevalence rate in this cohort was lower, at 11.5%. There were differences by occupation: with a 2% seroprevalence in the doctors, 5.7% in allied staff, 13.7% in nurses, 13.8% in student nurses and 12.3% in general assistants. The highest prevalence by age was in the 25 to 34 year old age group (15.9%).

The study also looked at what percentage of the healthcare workers might need to go on treatment.



74 of 172 HIV-positive participants (43%) in the study provided blood samples for CD4 tests. The median CD4 cell count was 397 (range 69-1359) but 18.9% had CD4 counts less than 200 and (28%) had counts in the 201-350 cells range.

In an accompanying editorial Dr Olive Shisana of the Human Sciences Research Council calculated that if these findings were extrapolated to the nation, the number of nurses with AIDS, or in danger of having opportunistic infections (those with CD4 cell counts 200-350) could outstrip the number of nurses being produced in the next couple of years.³³ "The supply [of nurses] is not meeting the demand. This is even before we consider the question of emigration of nurses, or their exit to other professions."

While producing more nurses should be encouraged, there is no reason why the HIV-positive nurses and other workers should be given up as 'lost'. They can be treated, after all. Connelly et al.'s data suggest that about 2.2% of all nurses would immediately qualify for treatment under current guidelines. This is a bit higher than the percentage of healthcare workers reported to be participating in ART programmes in the TTR 5-nation survey presented by Dr Corbett in Paris, where 1.9% and 1.6%, respectively, of the staff at randomly selected and best practice facilities were reported to be attending the ART clinic at their own facility.³⁴

"The rate of death among staff for 2006 was almost 1% at routine health facilities," said Dr Corbett. "That's high for a workplace setting, but it is not the very high rates that some smaller studies were reporting from individual African facilities." She told HATIP that human resource managers at the facilities were reluctant to make an estimate of how many deaths or retirements were occurring at the facilities. However, in another part of the survey, respondents reported that

about 45% (at the routine facilities) and 41% (at the best practice facilities) of the retirements or deaths in the previous year were believed to be due to AIDS.

The risk and burden of TB among healthcare workers

"Healthcare workers are at risk simply because they are part of our population and if our population incidence and prevalence is high, we can expect the same in our healthcare workers – both with HIV and with TB," said Dr Natalie Beylis, during her talk which was directed to healthcare workers during a skills building session at the first South African TB Conference. "But the risk from TB is obviously higher because they are working in close proximity to infectious TB patients on a day to day basis, and infection control might not be optimised in their healthcare setting. So we know that the rates are much higher in healthcare workers compared to the general population. And of course, they have also got to deal with MDR/XDR-TB."

That skills building session put together by Dr Beylis, Dr Kerrigan McCarthy and Dr Juno Thomas informs much of this section.

The following studies have looked at latent TB among health staff using either tuberculin skin testing (TST)

Prevalence of latent TB in HCWs (some selected studies)³⁶

Country	Number	% TST+	IGRA+
Georgia ³⁷	265	67	59
Taiwan ³⁸	39*	84	10
Uganda ³⁹	396*	57	ND
Côte D'Ivoire ⁴⁰	512*	79	ND
South Africa ⁴¹	152*	48.8	ND

* = BCG vaccinations

“The number of nurses with AIDS in South Africa could outstrip the number of nurses being produced in the next couple of years”

or newer interferon γ release assays (IGRA) (such as QuantiFERON or ELISPOT). Note, most had previously been vaccinated with BCG, which can lead to some false positives in TST (especially with repeated testing). According to a review by Joshi et al., (which goes into much more detail on all of the following) the prevalence of latent TB among healthcare workers in low and middle income countries is, on average, 54% (ranging from 33% to 79%).³⁵

Without preventive treatment, healthcare workers with HIV and latent TB have about a 5% annual risk of developing active TB, while those without HIV have about a 10% risk of active TB in their lifetime. However, about half of active TB occurs in the first two years after infection, so it would be useful to know the annual risk of TB infection (ARTi) in healthcare workers.

A few studies have studied that in high TB burden settings. One found an annual incidence of 14.3 infections per 100 person years (95% CI 4-30) among 35 resident interns in Peru.⁴² Another study by Corbett et al reported an ARTi of 19.3 per 100 person years (95% CI 14.2-26) in 159 Zimbabwean nursing students (a rate more than six times as high as experienced by 195 polytechnic students in the study).⁴³

Several retrospective cohort studies have reported high incidences of active disease in TB in healthcare workers, ranging from 1180 cases per 100,000 in the Western Cape of South Africa in 2002-4 to over 5,700 cases per 100,000 in Malawi in 2003.⁴⁵

In most cases, the incidence of active disease among healthcare workers was many times greater, and in the case of Ethiopia, *twenty times* greater than that of the general population.⁴⁶

The recent TTR survey reached a similar conclusion.⁴⁷ “The rates of treatment for TB are several times the national case notification rates in each country. And so these would be equivalent to 700 or 800 per 100 000 case notification rates,” said Dr Corbett. “48% of health workers [in the survey] stated that TB was the most serious threat to their health, which was higher than any other condition. 35% and 39% of the healthcare worker deaths in the previous year (in the routine and best practice facilities respectively) were attributed to TB,” she added, stressing that this was clear evidence that infection control practices are not good at most of these facilities.

This is even more worrisome in light of multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB). As HATIP has previously reported, several of the deaths that occurred at the Church of Scotland Hospital in the Tugela Ferry XDR-TB outbreak were among healthcare staff.⁴⁸ But MDR-TB is a much more common threat.

“We had one of our clinic senior nursing sisters recently diagnosed with MDR-TB and she subsequently died,” said Dr Juno Thomas of Chris Hani Baragwanath Hospital in Soweto at the South African TB Conference. “Following that, I tried to engage with the superintendents and even the CEO of the hospital – firstly – to arrange an Infection

Control Committee. We do not have an Infection Control Committee at that large hospital. If you don’t have support from your hospital and from higher up, you really are powerless to make any changes.”

The current practice of institutionalising people with drug-resistant TB in healthcare facilities may be making things much worse because some of the patients seem to be lashing out. A couple of participants at the skills building session at the South African TB Conference were convinced that the patients in the isolation wards were deliberately trying to infect the healthcare workers with their strains of TB.

“I’ve had to go in there to mediate between the patient and the administration and whoever. In the Eastern Cape, the patients feel they’re locked away ... and if you have them in the hall where you are now going to hear all their grievances, 140 patients will cough and cough on you. And they deliberately cough upon all our nursing staff,” said one woman.

This suggests yet another good reason to move towards community-based models of providing treatment to people with MDR-TB. But even that won’t remove the risk entirely.

“If you want to designate a specific ward or side-room for MDR patients, no one will voluntarily work there,” said Dr Thomas. “But they are working with MDR-TB patients all the time, unknowingly, anyway. Education, I think, is one of the biggest barriers to infection control in healthcare workers.”

Although participants in the TTR survey had a good basic knowledge of TB infection and control, the survey identified several areas where even key cadres had low levels of knowledge:

- Only 44% of qualified staff agreed with the fact that patients with negative smears can be considered non-infectious
- Only 62% agreed with the basic principle of cough hygiene that patients with a cough should be given a cloth or mask to cover their mouths until TB has been excluded
- There was poor knowledge (in only 23%) that keeping TB suspects/patients outdoors would keep TB from spreading
- Only 19% of health workers knew that ordinary surgical masks do not protect the wearer from TB
- 63% thought that ART would help protect HIV-positive health workers from TB, but only 39% thought isoniazid preventive treatment (IPT) could do so.

At facility level:

- Only 28% practising outpatient triage for cough;
- Only 10% practising cough hygiene (cloths to cover mouth, coughing);
- Only 18% collecting sputum outdoors, as opposed to the toilet which is the most common place; and
- Only 46% of facilities with wards had a separate ward for TB inpatients.

And there was very little in the way of active TB prevention for HIV-positive health workers: mainly reliance on change of duties and early detection. Only Ethiopia had a policy of routine IPT for exposed health workers. ■

**CHILDREN ARE A PRIDE TO THE FAMILY.
THEIR WELLBEING CAN BE AFFECTED BY THE PARENTS
HIV SERO STATUS.**



You can get FREE information about HIV testing and counselling

at:

on:

LABORATORY





Caring for the caregivers in the face of HIV and TB: interventions



Health Clinic,
South Africa
Lung Health
Image Library /
Damien Schumann



How can healthcare workers be provided with care, support and better working conditions? *Theo Smart reports.*

Interventions

In its original report, Treat, Train and Retain (TTR – WHO's plan for AIDS and the health workforce) WHO recommended, as part of the "Treat" component,

- the development of a package of HIV treatment, prevention, care and support services for health workers in countries affected by HIV, and
- occupational health and safety and other measures to improve the workplace to enable health systems to 'retain' workers.

But the two really go hand in hand.

Protecting and caring for healthcare workers will require concerted action on several fronts, at the facility level, department of health, medical training facilities, as well as at national and global policy level.

- A cross-cutting task is to improve the quality of training (pre- and in-service) and support and supervision – strengthening elements designed to help healthcare workers protect themselves. This would include how to manage stress, and to protect themselves in the workplace, from occupational and community exposure to HIV and other infections
- Measures should be implemented to improve workplace safety at the facility level and system-wide to reach nurses at primary health clinics, community outreach workers and home-based providers, especially for those who are HIV-infected
- Introduce measures to improve stress management support for the staff at health facilities
- Introduce systemic measures to improve the living and working conditions of health workers
- HIV services: provide HIV testing/care/ART in a way that is accessible and acceptable to the healthcare staff. Several models of delivery have been proposed and a few have reported on their experience (see below)
- Making these things happen may require new legislation, legal action and activism.

Note: similar services should also be put in place for teachers – which we hope to address in a future article.

Improving workplace safety

It's easy to come up with a laundry list of services that should be offered at the facility level (see the box on page 17 for a basic list used by the TTR survey to review participating facilities). But even though it may not be possible to eliminate risk entirely, every caregiver has a right to expect a safer workplace through the implementation of universal precautions (a simple set of measures to protect health from a wide range of

infections including blood-borne viruses) with essential supplies and protective equipment, ready access to post-exposure prophylaxis (PEP), immunisation against hepatitis B, HIV/TB screening services, IPT and TB infection control.

Again, these are just basic interventions which healthcare services should offer. It may be necessary to take political or legal action to get health departments and hospital administrators to do so (see end).

Universal precautions: Unsafe injections can spread HIV and blood-borne pathogens (such as hepatitis B and C virus, Ebola and Lassa virus and malaria).¹ The risk of exposure to HIV and other infections can be significantly lowered by good adherence to universal precautions:

- Routine hand washing after direct contact with patients
- No needle recapping
- Safe collection and disposal of needles and other sharp instruments
- Use of gloves for contact with body fluids, non-intact skin and mucous membranes
- Wearing a mask, eye protection and a protective gown if blood or other body fluids might splash
- Covering cuts and abrasions
- Cleaning up spills of blood and other body fluids
- A safe system for hospital waste management and disposal

And yet, in the University of South Africa (UNISA) study, described in the previous article, some participants complained that their workplaces did not inform employees about proper universal precautions, and that some did not have procedures in place to cope with needlestick injuries.²

Healthcare staff need: clear instructions about each facility's procedures; ongoing training in universal precautions, especially for those with less formal medical education (community-based caregivers, etc); ongoing supervision and mentoring from senior staff; and systems to monitor adherence to good practice.

Supplies: "Protective clothing is not available in the labour ward where I work. Every night when I go to bed I think: Maybe tomorrow I will become infected by mistake", said one participant in the UNISA study.³

In order to practice universal precautions and safe injecting processes, facilities need to maintain stock of essential supplies: gloves, disposal containers for sharps, and soap and have running water.

In the TTR survey, supplies were reported to be well below what is required for safe working practices, with only 31.7% of participants reporting adequate availability of all four items (23.6% from randomly-selected and 41.9% best practice facilities, respectively, $p < 0.001$).⁴

Safety-engineered sharp devices: New devices (sharps and needles) have been designed with protective features such as mechanisms to shield, blunt, or retract the needle in order to protect the user's hands during disposal.⁵ These have come into wide use in the US, after the Needlestick Safety and Prevention Act of 2000.

UNICEF and WHO recommend that donors fund safe (single-use) injection equipment bundled with medicines that must be administered by injection (such as immunisations). But there are many other applications,

and single-use devices such as retractable needles have shown a high degree of safety especially when used for vascular access and drawing blood.

At the International AIDS Conference in Mexico City, Dr Jorge Mancillas of Population Services International (PSI) described his organisation's work to improve worker safety, including a Safe Devices Campaign to speed the adoption of retractable syringes, which are not only safe for healthcare workers, and safe for waste collectors, but also safe for patients because they cannot be reused.

"The barrier, for the widespread use of retractable syringes is the current price differential. But this is not explained by anything in the design or materials used in retractable syringes. The price differential is due to the size of the market. So WHO has recommended the creation of consumer demand for new single-use injection equipment. But decision makers – governments or employers – have by and large not taken the necessary steps to implement this policy," he said.

PSI's goal is to encourage a widespread shift to safe devices by building economies of scale, country by country to eliminate the price differential, to change national and international policy and find finance sources to help the developing countries who would like to make the transition.

Hepatitis B immunisation: Hepatitis B virus is the most common blood-borne pathogen to which healthcare workers are exposed – with an estimated two million exposures a year.⁶

However, a relatively inexpensive (less than US \$0.50 per dose) vaccine can prevent hepatitis B virus infection. But in the survey at one Johannesburg Hospital less than half of the healthcare workers had been vaccinated.⁷

WHO recommends that healthcare workers be immunised early in their career. Pre-vaccination serological tests are unnecessary but could save resources if feasible where prevalence of immunity is high.

Post-exposure prophylaxis (PEP): The timely administration of a four-week prophylactic course of antiretroviral drugs after occupational exposure (needlestick injuries) can prevent HIV infection. The exact regimen varies by country.

Time is of the essence for PEP. It is generally recommended that post-exposure prophylaxis commences within 24 to 36 hours of injury, and preferably within a few hours of exposure. However, that means that supplies of the PEP regimen need to be on hand.

Not only should there be clear workplace policies around PEP, there should be emotional support and counselling available to help healthcare workers in their decisions to go for HIV testing, access PEP or disclose their status to significant others if necessary.⁸

Isoniazid Preventive Therapy (IPT)/TB Screening: Likewise, IPT should be used to prevent TB in healthcare workers with HIV who have been exposed to TB, and who do not show signs of active disease. Concerns about mistreating sub-clinical disease can be minimised by only treating the well. A simple symptom checklist (for cough, fever, severe weight loss, etc.) can be used to exclude anyone with signs of active disease, who should receive a further diagnostic work-up for TB.

Only a few countries have adopted this as policy, and even fewer implement it – however, as with other



Lab technician recapping a needle.
Lung Health
Image Library/
Sarah England

interventions described in this article, healthcare workers need to demand it as a right.

Note that, as part of TB prevention, healthcare staff should also be aware of their HIV status, since being HIV-positive puts them at much greater risk of TB disease. HIV testing is discussed in more detail below.

TB infection control: Healthcare workers need to be trained in good TB infection control practice, which is not only for the patient, but to protect themselves as well.

"If you get TB, it's an occupational disease," said Dr Thomas at the South African TB Conference.

Many facilities are investing in expensive engineering interventions for infection control, such as UV lights or ventilation systems. But this may be a problem if many staff mistakenly believe it means they are safe and no longer need to worry about basic TB infection control practices, such as teaching patients about cough hygiene.

The problem is compounded by the fact that programmes, facilities and healthcare workers aren't sure which infection control interventions are the most critical to implement. According to recent systematic

“Everyone wore the masks and opened windows for the first week. By the next week, all the windows were closed. Unless you've got infection control police it's very difficult to make change stick”

reviews of the available evidence, presented by Dr Fabio Scano of WHO's Stop TB department at the 39th Union World Conference on Lung Health, data on the efficacy of some of the TB infection control interventions are conflicting or of low quality and, in other cases, there are no data.⁹

For instance, triage and cohorting – attending to coughing patients first and separating them from other patients for diagnosis and care – is widely recommended to reduce the risk of TB transmission within the healthcare facility. Yet, in the literature review, out of two thousand papers, only 12 contained any real data on this. One study from a low or middle-income country showed little impact from the practices,¹⁰ but in two others, triage and cohorting affected a significant reduction in TB transmission.^{11,12} Most studies showed that implementing infection-control measures including triage and cohorting is associated with a decline in

Seven key aspects of service provision for staff and their families and minimum criteria for a facility to be given a “fair” rating in the TTR survey (copied from the full report)¹⁴

Service	Minimum criteria (all required)
Occupational HIV prevention	<ul style="list-style-type: none"> ● Written PEP policy/guideline ● Responsible person/committee for infection control ● Refresher training on safe injection technique ● Gloves, sharps bins, soap & running water at visit ● No unsafe sharps disposal evident on tour ● No unsafe injection technique evident on tour
Sexually transmitted HIV prevention	<ul style="list-style-type: none"> ● Written facility policy/guideline ● Ongoing education on safe sex ● Condoms available in both male and female toilets
Promotion of HIV testing of staff	<ul style="list-style-type: none"> ● Written facility policy/guideline on HIV testing of staff and what is available for those testing HIV positive ● Ongoing education/promotion of benefits of knowing one’s HIV status ● Facilitated access for staff wanting testing either at own facility or by arrangement with another facility/provider
Access to ART for staff	<ul style="list-style-type: none"> ● Written facility policy/guideline ● Ongoing education/promotion of benefits of knowing one’s HIV status ● Facilitated access to free ART for staff either at own facility or by arrangement with another provider
Access to ART for family of staff	<ul style="list-style-type: none"> ● Written facility policy/guideline ● Access to HIV testing for family members of staff ● Facilitated access to free ART for family of staff either at this facility or by arrangement with another provider
TB infection control	<ul style="list-style-type: none"> ● Written facility policy/guideline ● Responsible person/committee for infection control ● Refresher training and monitoring of control practices ● Essential interventions in place <ol style="list-style-type: none"> 1. Education on cough hygiene 2. TB suspected in anyone with prolonged cough 3. TB patients/suspects separated from non-suspects 4. TB diagnosed and treated promptly
Prevention of TB in HIV-positive staff	<ul style="list-style-type: none"> ● Written facility policy/guideline/manual/material concerning TB as an occupational health risk ● Refresher education/training of staff on HIV/TB ● Essential interventions in place <ol style="list-style-type: none"> 1. Policy for moving HIV-positive health workers away from high exposure jobs on request 2. Promotion of HIV testing of staff with high exposure to TB patients

Note, no facility (routine or best practice) achieved a rating of better than “poor” on all seven assessed services.

nosocomial transmission but the practice is “always part of a package of intervention [of administrative controls],” said Dr Scano. “However, there is strong theoretical benefit to implement these interventions.”

“Likewise, the review didn’t find any direct evidence showing that good cough hygiene prevents TB transmission, though there is theoretical rationale to support it,” said Dr Scano.

There are nine papers with usable data on ventilation – with good ventilation clearly reducing TST conversions and transmission of drug-resistant cases. But when it comes to using UV lights and respirators, “there is a discordance in the data between modelling/lab experiments and epidemiological data,” he said.

Some epidemiological studies have shown respirators are not as effective as modelling studies suggest that they should be. But it is difficult to assess the effectiveness of respirators when healthcare workers given masks don’t use them consistently, or when they haven’t made sure that they fit properly.

These reviews were commissioned to inform the development of a new WHO policy on TB infection control. Dr Scano told HATIP the policy is being finalised, and should be posted online around the end of February 2009. Even so, as Harries et al. wrote in one key study highlighting the disconnect between guidance and practice, “The introduction of guidelines for the control of TB infection is an important intervention for reducing nosocomial transmission of the disease, but rigorous monitoring and follow-up are needed in order to ensure that they are implemented.”¹³

“It’s something that has to be a permanent institution at the hospital, to have ongoing education, ongoing infection control audits,” said Dr Thomas. “Otherwise nothing changes.”

“After our clinic sister got MDR, I fought to get N95 masks and I taught the nursing sisters, I taught the other doctors, I taught the counsellors and we had a dietician and a social worker as well and everyone got a mask. And I taught them how to use it and told them about storage, how long they could use it and told them to open the windows in their offices. And everyone did it for sort of the first week. By the next week there was only one other doctor wearing the mask and all the windows were closed. So unless you’ve got ‘infection control policemen’ – that are going to go around the clinic or hospital all the time and shout at people – it’s very difficult to get change of practice.”

Helping healthcare workers deal with stress and prevent burn-out

Helping healthcare workers deal with occupational stress may actually improve the uptake of workplace safety measures and TB infection control.

“There is high burn-out and because of this, you’ll find that the chances of you taking universal precautions significantly decreases,” said Chisomo Zileni, a nurse from Malawi, speaking at the International AIDS Conference in Mexico City. “This puts the young nurses at risk of contracting HIV and tuberculosis.”

But there are ways to manage stress. In the UNISA study, caregivers who were supported by their organisations or employers produced significantly lower scores on the HIV/AIDS-related stress-factor scale.¹⁵ There was a significant correlation between the number of different support services offered by an organisation

or employer and lower scores on the HIV/AIDS-related stress-factor scale ($r_s = -0.152$, $p = 0.030$).

Healthcare systems need to prepare new healthcare workers for the demands of the HIV/AIDS (and TB) epidemics by integrating stress management components into pre-service training. "Caregivers should be trained not only in how to manage HIV disease, but equipped with extra skills and a broader understanding of the effects of HIV on individuals, their community and society," said Professor Van Dyk of UNISA.

In addition she proposed increasing professional supervision and mentoring and providing access to emotional support and therapeutic counselling, stress-reduction and coping skills, ongoing training and a supportive working environment.

In another paper, Prof. Van Dyk emphasised that stress reduction and coping techniques tend to be culture-specific. She conducted another survey with 137 black Zulu-speaking and 142 white English-speaking health workers and reported that the black participants tended to deal with stress through group activities, such as singing, dancing and mutual discussion of their problems in a way that allows emotion to be expressed, while white participants related mental wellbeing to individuality, independence and self-sufficiency and chose more private ways of handling stress.¹⁶

A needs assessment in Zambia also identified the need for training and support among nurses and midwives infected with or affected by HIV. Afterwards, the Zambian Nurses' Association and the Norwegian Nurses' Organization partnered to launch a Caring for the Caregivers project – which has set up a network of over 87 support groups.¹⁷ The groups provide a range of services across the country (caring for ill and retired nurses and orphans; training activities etc.). But one interesting aspect of the programme was that, after the provision of a little seed funding, the support groups are supposed to be financially self-sustaining through income-generating projects. While not all the projects have been financially successful, they have given each group something to work together on, in addition to HIV care and support. In fact, some complain that income-generating activities take up too much time.

Again, one of the best ways to improve the mental health of healthcare workers is to empower them to do something about HIV/AIDS and TB – by equipping them with the essential tools and resources to make a difference in their patients' lives. But since an HIV-positive patient on ART is in chronic care and may have a variable course of illness, so Prof. Van Dyk recommends finding other ways of rewarding healthcare staff for job performance and for providing high quality palliative care.

Examples of other strategies from AIDS care programmes to help caregivers deal with the strains on those caring for people with HIV/AIDS, can be found in *Caring for carers: Managing stress in those who care for people with HIV and AIDS*, part of the UNAIDS Best Practice Collection.

Systemic measures to improve the living and working conditions of health workers

To address occupational stress and retain staff, healthcare workers need to earn a living wage, have decent housing and work in a safe environment.

Systemic measures must be put in place to improve

workplace conditions, with enforcement mechanisms to make certain that policy disseminates down to the facility level.

Better pay and bonuses for performance would be ideal. But recognising that resources are constrained and that extra funds are not always available, with health worker input, health systems should consider developing and implementing additional incentive schemes such as more training opportunities, housing, transport support, childcare facilities, food rations, free health care, flexible working arrangements or other benefits. (see *Guidelines: Incentives For Health Professionals*.)

HIV testing and services – and models of delivery

As already mentioned, stigma and confidentiality issues potentially limit uptake of HIV programme services by healthcare staff, who may fear discrimination at work if they access HIV services at their own facility.

Testing: The first and greatest hurdle may be accessing HIV testing services. While these must be made available on site for staff, as the TTR survey demonstrated, most do not make use of their onsite services.¹⁸

However, "in individual interviews we found the idea of annual HIV testing surprisingly acceptable. 75% say

“Healthcare providers are stealing HIV rapid tests from the workplace to enable self-testing”

they would be very willing to have annual HIV testing, even if this was not linked to any extra HIV care. And only 5% here say they would not be at all willing, regardless of extra care provided," said Dr Corbett. But in focus-group discussions, there was "a lot of concern about the need for absolute confidence that could not be provided by your own workplace colleagues."

When given a choice about how they would like to be tested each year, almost half said that a self-testing option (either making self-testing available in private or at home for all staff) would be either their most or second most preferred option. Hiring an independent VCT provider to visit and provide testing each year was the next preferred option, though a high percentage also say they would prefer an HIV test to be part of their routine health check.

This final observation is especially worth noting because of field reports described below, that show uptake of testing increases when it is provided within the context of comprehensive care at staff clinics.

The TTR survey noted that many healthcare workers had secretly tested themselves – and this was something that some members of our advisory panel remarked upon.

"Healthcare providers (and other hospital/clinic employees) are stealing HIV rapid tests from the workplace to enable self-testing. This has become such common practice, that institutions have taken to locking up HIV tests so they cannot even be obtained easily by doctors who want to test their patients! This rather than recognising that healthcare workers, like patients, do not



want to utilise the available VCT services due to stigma and fears of lack of confidentiality, and identifying an alternative,” Dr Krista Dong told HATIP.

One alternative is to buy finger prick HIV test kits from private pharmacies. In some settings, these are widely available at a cost ranging from US \$2 to \$10 per test. However, the process of asking for the kit may be a disincentive to some healthcare workers, and there is a clear need to provide more support and counselling to healthcare workers who chose this option. Other alternatives are needed to make HIV testing more widely available, and linked to services for healthcare workers.

ART and HIV care: The TTR survey also investigated how participants thought they might prefer to receive ART and other HIV treatment services – with somewhat counter-intuitive results.

- Several models of HIV service delivery were considered, and participants ranked them in the following order:
- Priority service at their own ART facility
- From a staff clinic providing ART within the context of comprehensive care
- Free medical insurance (and presumably making their own arrangements for care)
- Priority access to another nearby ART clinic
- A free arrangement with a private doctor
- Separate ‘Wellness’ clinics for health workers in larger cities
- Mobile clinics
- Consultation by phone (with drugs sent to them)

According to the full report, “Secrecy about one’s status does not appear to be problematic by the stage of seeking ART, and focus groups support a preference for being cared for by people who know you and so will give

good service. There was little evidence of stigmatization of co-workers attending ART clinics, with supportive opinions more commonly expressed.”

But these results have to be interpreted with caution because the majority of participants in the study are presumably not HIV-positive themselves. In addition, there are several other reasons to be somewhat circumspect about the findings. One is that when participants were asked to rate what qualities would be important to them in an ART service, the highest percentage chose “confidentiality” as the most or second most important feature to them – which would seem difficult if they were receiving treatment along with other patients at their own ART clinic. Another problem is that it is difficult to judge the uptake of ART services at these facilities in the survey since the HIV prevalence of the cohort is unknown – but as Dr Corbett said, it seems rather low at the facilities in the survey.

So it may be better to look at these findings in light of the evidence coming from practice in the field, keeping in mind that there are no comparative data. Some of the field evidence suggests that the findings are not entirely off the mark – but what may actually be needed is a range of options for accessing care – though the uptake of services clearly seem to be enhanced when provided in the context of comprehensive health services rather than at a dedicated ART clinic.^{19,20}

Uebel et al. report on three programmes in southern Africa:²¹

McCord Hospital in Durban provides health care for staff free of charge at the staff clinic. All aspects of HIV care (including testing, CD4 monitoring and ART) are integrated with other comprehensive services provided at the staff clinic, including acute conditions and chronic conditions, such as TB. It is confidential for staff because it is separate from the general ART clinic.

Before institution of the programme, few staff (6



to 11 per year) were accessing VCT, but increasing numbers of staff have been accessing VCT every year since the programme started. There has been a great improvement in the morale and some staff members on ART have now disclosed their status to encourage others to undergo testing or start receiving treatment.

The programme also provides support groups for nurses to cope with the burden of providing care for dying patients, particularly adolescents and children.

Mseleni Hospital, a government-supported facility in a remote rural part of KwaZulu-Natal, also provides care, including HIV care and ART, for staff through the staff clinic, though some staff have chosen to obtain medical care through local private practitioners. Here, as well, staff have become increasingly willing to disclose their status to colleagues. However, uptake among non-caregiving staff (groundkeepers etc.) is still limited.

Tshedisa Institute in Gaborone, Botswana is a privately-funded 'Wellness' clinic offering comprehensive holistic care to healthcare providers that is within walking distance of the Princess Marina Hospital. Tshedisa means "to rejuvenate or give life" in Setswana. The programme focuses on healthcare workers with HIV as well as those who are affected by caring for people with HIV and who are experiencing stress, compassion fatigue, and burn-out. It "offers holistic health services,

including one-on-one counselling, support groups, creative arts therapy (e.g. dance, yoga, visual arts, poetry, and creative writing), comprehensive HIV/AIDS testing and treatment, general medical check-ups, and a quiet garden for staff to enjoy," according to Uebel et al. They also offer courses on stress management and cognitive behavioural therapy. Group counselling is also available for healthcare workers.

In a little over a year since opening, 204 healthcare workers have come in for HIV testing, 12% were found to be HIV-positive and 17 have started receiving ART.

Other wellness centres have been set up in Swaziland, Lesotho, Zambia (linked to the support groups mentioned earlier) and now Malawi. According to Tesfamicael Ghebrehiwet, of the International Council of Nurses, speaking at a session in Mexico City, these have been established in order to provide dedicated health services including HIV, TB, prevention, treatment and care; PEP; stress management; occupational safety training; capacity building; for healthcare workers and their families – all within the context of comprehensive care.

In Lesotho, these opened in November 2007 and have already reached more than 1300 healthcare workers with services and training. Training includes courses in stress management, behaviour change, PEP, WHO's Integrated Management of Adolescent and

Doctors consulting with TB patients, Guinea.

Lung Health Image Library / Jad Davenport

Adult Illnesses and so on. They also provide ART, nurse counselling and wellness checks.

In Swaziland, a wellness clinic was set up in 2006 in the city of Manzini. According to presentations at the International AIDS Conference in Mexico, it focuses on offering healthcare providers comprehensive health services with counselling, HIV testing and other laboratory services, ART, TB and malaria clinics. Other services include skills building training, stress management, care and support programmes and recreation.

According to Ghebrehiwet, 6225 healthcare workers have been reached (77% of the total health workforce) and HIV testing and counselling has increased among health workers.

Wellness Centres have been heavily promoted, however, in a more recent report, researchers from the Swaziland Nursing Association and the Southern African Human Capacity Development Coalition conducted a survey that suggested that Wellness Centres may not meet every healthcare worker's needs.²² The survey included 35 nurses, 50% of whom said that if they knew a colleague who was HIV-positive, they would advise her to go to another public or private facility for care. Twenty-five percent of them suggested that they get care at their own clinic, while only 20% of them recommended the Wellness Centre.

"Many said that there would be very few places where she would not know some of the health workers. This was echoed by many of those who advised her to stay at her local clinic, as there was really no place she could go for complete anonymity. This perceived lack of privacy was a pervasive theme, in part due to the fact that Swazi health workers are members of a small community with shared training and work environments in a small country," the researchers noted.

The Wellness Centres may still be stigmatised, especially if the "well" never use them. Notably, participants in the survey felt that HIV services should be offered within the context of comprehensive services, and said that services were also needed for diabetes, hypertension and safe motherhood, along with counselling about HIV and stress.

These findings were shared with key stakeholders, and since that time 12 additional 'Wellness Corners' have been set up in facilities in the country, serviced by mobile services from the Manzini clinic.

The paper identified five key lessons learned:

More needs to be done to address the unique aspects of HIV stigma among healthcare staff.

"A range of services needs to be provided, as no single facility or programme will be acceptable to all health workers. In Swaziland, the stand-alone Comprehensive Wellness Center should continue but should work with other providers to harmonize marketing and identify gaps in services. Health workers need a range of options in order to feel comfortable seeking HIV care."

Peer support groups should be considered to address the emotional and financial stresses health workers face.

In order to be utilised and acceptable, services for health workers must be comprehensive and accessible.

Data on health workers' service use from all of these programmes should be monitored regularly (preserving confidentiality) to help to identify unmet needs.

While there may not be one 'right' way for health systems to begin to offer HIV services to their

healthcare workers, it is important that programmes begin to be put in place. According to Uebel et al., formal policies must be put in place regarding the management of HIV/AIDS among staff in the workplace.²³ The authors note that TB management continues to be a challenge, because treatment is generally only provided by separate TB clinics. However, health systems can reduce the burden of TB among their staff by offering IPT, improving TB infection control, and TB screening and diagnostic services. "Programmes to provide HIV care and treatment for healthcare workers are an urgent necessity," Uebel et al. wrote. They recommend that health departments and hospitals perform anonymous surveys to assess the needs for care and treatment among their own staff, and then put in place a programme that is "convenient, holistic and integrated into one clinic".

Political action

These interventions require commitment from governments, employers and managers, which is often lacking. But healthcare workers are beginning to learn how to be activists.

In Mexico City, the Health Action AIDS Campaign of Physicians for Human Rights and the Association of Nurses in AIDS Care released a global call to action (see *Resources*), calling attention to the need for workplace health and safety assurances for all nurses and healthcare workers. Most important, it calls for commitment by government, funders and partners to adopt basic provisions of health and safety for health workers and incorporate them in the implementation of their programmes, (supporting) the delivery of HIV prevention, care and treatment services.

"It is a requirement for any government in any country to avail nurses with accessible, confidential and affordable healthcare services," said Christine Mutati of the Zambia Union of Nurses Organization. "It is prudent for any government and other stakeholders to formulate and implement policies that will promote equitable distribution of care and support to all healthcare workers."

Others took it a step further.

"At times, we have to overcome professional politeness. Sometimes when the policy makers or employers will not make sound policy decisions, then we have to use our muscle," said Dr Mancillas at the conclusion of the symposia in Mexico City. "In South Africa, Democratic Nurses Association last year achieved great gains which not only impacted the income and working conditions of nurses in South Africa but also improved, going to strengthen the health system in their country through industrial action – they went on strike! Not because they wanted to, but because after months of trying to persuade and negotiate with the government, they took up the only action that they felt, and which subsequent events proved, to be effective."

"We also have a responsibility to our patients and to the health systems to be assertive when necessary. We have two tools: One when we negotiate with our employers – our collective bargain agreements, which can, should and do often cover issues that go beyond salaries, terms of employment and working conditions. And secondly, the other tool is through legislation to implement changes at a national level – achieved through our ability to lobby in different countries." ■

A clinical review (pages 4 to 11)

References

- [1] Vitols MP, du Plessis E, Ng'andu O. *Mitigating the plight of HIV-infected and -affected nurses in Zambia*. International Nursing Review, 54(4): 375-382(8), 2007.
- [2] Van Dyk AC. *Occupational stress experienced by caregivers working in the HIV/AIDS field in South Africa*. African Journal of AIDS Research 6(1): 49-66, 2007.
- [3] Uebel KE, Nash J, Avalos A. *Caring for the Caregivers: Models of HIV/AIDS Care and Treatment Provision for Health Care Workers in Southern Africa*. JID; 196:S500-4, 2007.
- [4] King LA, McInerney PA. *Hospital workplace experiences of registered nurses that have contributed to their resignation in the Durban metropolitan area*. Curatiosis 29(4):70-81, 2006.
- [5] Van Dyk, Op cit.
- [6] Minnaar A. *Caring for the caregivers-a nursing management perspective*. Curatiosis 24(3):19-26, 2001.
- [7] Smit R. *HIV/AIDS and the workplace: perceptions of nurses in a public hospital in South Africa*. J Adv Nurs 51(1):22-9, 2005.
- [8] Uebel, op cit.
- [9] Feely F. *Fight AIDS as well as brain drain*. Lancet 368:435-436, 2006.
- [10] Dambisya M. *The fate and career destinations of doctors who qualified at Uganda's Makerere Medical School in 1984: retrospective cohort study*. BMJ; 329:600-1, 2004.
- [11] Galvin S, de Vries D. *HIV care for health workers: perceptions and needs. The Capacity Project*. Technical Brief 13, 2008.
- [12] Van Dyk, op cit.
- [13] Perreault Y, Demetrakopoulos A. *HIV/AIDS resiliency initiative: sustaining ASO workers*. Int Conf AIDS, Bangkok, abstract no. TuPeE5588, 2004.
- [14] Smit, op cit.
- [15] Lehmann U, Zulu J. *How nurses in Cape Town clinics experience the HIV epidemic*. AIDS Bulletin 14(1), pp. 42-47, 2005.
- [16] Nzama RS, Welz T. *Mentorship programme for HIV/AIDS lay counsellors in Hlabisa district rural KwaZulu-Natal- South Africa*. Int Conf AIDS. Bangkok abstract no. E10883, 2004.
- [17] Armstrong S. *Caring for carers: Managing stress in those who care for people with HIV and AIDS*. UNAIDS Best Practice Collection, 2003. ftp://ftp.hrsa.gov/hab/PGuide_2003.pdf
- [18] Maslach C, Goldberg J. *Prevention of burnout: new perspectives*. Appl Prev Psychol 7: 63-74, 1998.
- [19] O'Neill JF, McKinney MM. *Caring for the Caregivers, in A Clinical Guide on Supportive and Palliative Care for People with HIV/AIDS*, 2003.
- [20] Steina J, Lewin S, Fairall L. *Hope is the pillar of the universe: Health-care providers' experiences of delivering anti-retroviral therapy in primary health-care clinics in the Free State province of South Africa*. Social Science & Medicine 64(4): 954-964, 2007.
- [21] O'Neill and McKinney, op cit.
- [22] Smit, op cit.
- [23] Van Dyk, op cit.

- [24] Corbett L. *Health worker's access to HIV/TB prevention, testing, treatment and care: Situational Analysis in 5 African Countries*. 39th Union World Lung Conference, Paris, 2008.
- [25] Galvin, Op cit.
- [26] Cameron E. *Normalising testing-normalising AIDS* [forum lecture]. Durban, South Africa: University of KwaZulu-Natal, 4 May 2006.
- [27] Eubel KE, Nash J and Avalos A. *Caring for the caregivers: models of HIV/AIDS care and treatment provision for health care workers in southern Africa*. JID 196:S500-4, 2007.
- [28] US Centers for Disease Control and Prevention. *Surveillance of healthcare personnel with HIV/AIDS, as of December 2002*. (http://www.cdc.gov/ncidod/dhqp/bp_hiv_hp_with.html)
- [29] Ganczak M, Barss P. *Nosocomial HIV infection: epidemiology and prevention – a global perspective*. AIDS Review. 10:47-61.
- [30] Pruss-Ustun A, Rapiti E, Hutin Y. *Estimation of the global burden of disease attributable to contaminated sharps injuries among healthcare workers*. Am J Industr Med.;48:482-90, 2005.
- [31] Shisana O et al. *HIV/AIDS prevalence among South African health workers*. S Afr Med J 94: 846-850, 2004.
- [32] Connelly D et al. *Prevalence of HIV infection and median CD4 counts among health care workers in South Africa*. S Afr Med J; 97: 115-120, 2007.
- [33] Shisana O. *High HIV/AIDS prevalence among health workers requires urgent action*. SAMJ 97(2), 108-109, 2007.
- [34] Corbett, 2008, op cit.
- [35] Joshi R et al. *Tuberculosis among health-care workers in low- and middle-income countries: a systematic review*. PLoS Med 3(12): e494 doi:10.1371/journal.pmed.0030494, 2006.
- [36] Thomas J, Beylis N, McCarthy K. *Infected health care workers*. South African TB Conference, Skill Building Session, Durban, 2008.
- [37] Mirtskhulava V et al. *Prevalence and risk factors for latent tuberculosis infection among health care workers in Georgia*. The International Journal of Tuberculosis and Lung Disease 12(5) 513-519(7), 2008.
- [38] Lee SS et al. *Comparison of the interferon- release assay and the tuberculin skin test for contact investigation of tuberculosis in BCG-vaccinated health care workers*. Scandinavian Journal of Infectious Diseases, Volume 40, Issue 5, pages 373-380, 2008.
- [39] Kayanja HK et al. *Tuberculosis infection among health care workers in Kampala, Uganda*. Int J Tuberc Lung Dis. 9(6):686-8, 2005.
- [40] Kassim S et al. *Tuberculin skin testing to assess the occupational risk of Mycobacterium tuberculosis infection among health care workers in Abidjan, Côte d'Ivoire*. Int J Tuber Lung Dis.;4:321-326, 2000.
- [41] Mosendane T et al. Unpublished data.
- [42] Bonifacio N et al. *High risk for tuberculosis in hospital physicians, Peru*. Emerg Infect Dis;8(7):747-8, 2002.
- [43] Corbett EL et al. *Nursing and community rates of Mycobacterium tuberculosis infection among students in Harare, Zimbabwe*. Clin Infect Dis. 44(3):317-23, 2007.
- [44] Naidoo S, Mahommed A. *Knowledge, attitudes, behaviour and prevalence of TB infection among dentists in the western Cape*. SADJ. 2002 Dec;57(11):476-8.

- [45] Kanyerere HS, Salaniponi FM. *Tuberculosis in health care workers in a central hospital in Malawi*. Int J Tuberc Lung Dis 7: 489-492, 2003.
- [46] Joshi, Op Cit.
- [47] Corbett EL 2007, Op cit.
- [48] Gandhi NR et al. *Extensively drug-resistant tuberculosis as a cause of death in patients co-infected with tuberculosis and HIV in a rural area of South Africa*. Lancet;368(9547):1575-80, 2006.

Interventions (pages 14 to 21)

References

- [1] Simonsen L et al. *Unsafe injections in the developing world and transmission of bloodborne pathogens: a review*. Bulletin of the World Health Organisation, 77 (10): 789-800, 1999.
- [2] Van Dyk AC *Occupational stress experienced by caregivers working in the HIV/AIDS field in South Africa*. African Journal of AIDS Research 6(1): 49-66, 2007.
- [3] Op cit. Van Dyk (2007)
- [4] Corbett EL et al. *Nursing and community rates of Mycobacterium tuberculosis infection among students in Harare, Zimbabwe*. Clin Infect Dis. 44(3):317-23, 2007.
- [5] Jagger J *Caring for Healthcare Workers: A Global Perspective*. Infect Control Hosp Epidemiol. 28:1-4, 2007.
- [6] WHO. *Health care worker safety*. Geneva, 2003.
- [7] Mosendane T et al. Unpublished data.
- [8] Op cit. Van Dyk (2007)
- [9] Scano F *Systematic reviews on TB infection control: preliminary results*. 39th Union World Conference on Lung Health and Tuberculosis, Paris, 2008.
- [10] Harries AD et al. *Preventing tuberculosis among health workers in Malawi*. Bulletin of the World Health Organization 80:526-531, 2002.
- [11] Yanai H et al. *Risk of Mycobacterium tuberculosis infection and disease among health care workers, Chiang Rai, Thailand*. Int J Tuberc Lung Dis 7(1):36-45, 2002.
- [12] Roth VR et al. *A multicenter evaluation of tuberculin skin test positivity and conversion among health care workers in Brazilian hospitals*. Int J Tuberc Lung Dis 9:1335-1342, 2005.
- [13] Op cit. Harries (2002)
- [14] Op cit. Corbett (2007)
- [15] Op cit. Van Dyk (2007)
- [16] Van Dyk *A Western and African mental health. European Congress of Psychology*, London, 2001.
- [17] Vitols MP, du Plessis E, Ng'andu O *Mitigating the plight of HIV-infected and -affected nurses in Zambia*. International Nursing Review 54 (4), 375-382, 2007.
- [18] Op cit. Corbett (2007)
- [19] Galvin S, de Vries D *HIV care for health workers: perceptions and needs. The Capacity Project*. Technical Brief 13, 2008.
- [20] Uebel KE, Nash J, Avalos A *Caring for the Caregivers: Models of HIV/AIDS Care and Treatment Provision for Health Care Workers in Southern Africa*. JID; 196:S500-4, 2007.
- [21] ibid.
- [22] Op cit. Galvin (2008)
- [23] Op cit. Uebel (2007)



ISBN 978-0-9558200-4-5
copyright © NAM Publications 2009
all rights reserved
charity number 1011220

contact details:

Lincoln House, 1 Brixton Road,
London SW9 6DE, UK
tel 020 7840 0050
fax 020 7735 5351
email info@nam.org.uk
web www.aidsmap.com

This clinical review was kindly supported by the Diana Princess of Wales Memorial Fund.

We would like to thank the following people who contributed to or reviewed this article:

Dr Linda Gail-Bekker, The Desmond Tutu HIV Centre, Cape Town, South Africa; Dr Liz Corbett, London School of Hygiene and Tropical Medicine, Harare, Zimbabwe; Dr Halima Dawood, Greys Hospital, Pietermaritzburg, South Africa; Dr Riitta Dlodlo, IUALTD, Zimbabwe; Dr Krista Dong, i-Teach, Edendale Hospital, Pietermaritzburg, South Africa; Dr Haileyesus Getahun, Stop TB Department, WHO; Dr Reuben

Granich, WHO; Chris Green, Spiritia Foundation, Jakarta, Indonesia; Dr Kerrigan McCarthy, Reproductive Health and HIV Research Unit, South Africa; Professor Emmerentia du Plessis, North-West University, Potchefstroom Campus, South Africa; Dr Fabio Scano, Stop TB Department, WHO; Dr Doug Wilson, Edendale Hospital, Pietermaritzburg, South Africa; Professor Alta Van Dyk, UNISA, Pretoria, South Africa.

Front cover image:

Julie, a TB nurse at Apac District Hospital, Uganda. Lung Health Image Library / Gary Hampton



HIV and AIDS Treatment in Practice



The articles in this newsletter are taken from HIV and AIDS Treatment in Practice – a free email newsletter that keeps you up to date on a huge range of key HIV issues.

Sign up today on our website for updates on the latest thinking in the field:

- Dilemmas in first line therapy
- Delivering adherence support
- Managing co-infection – TB and HIV
- Integrating approaches – palliative care

www.aidsmap.com/hatip

Here is how this newsletter has supported people working in HIV all over the world:

