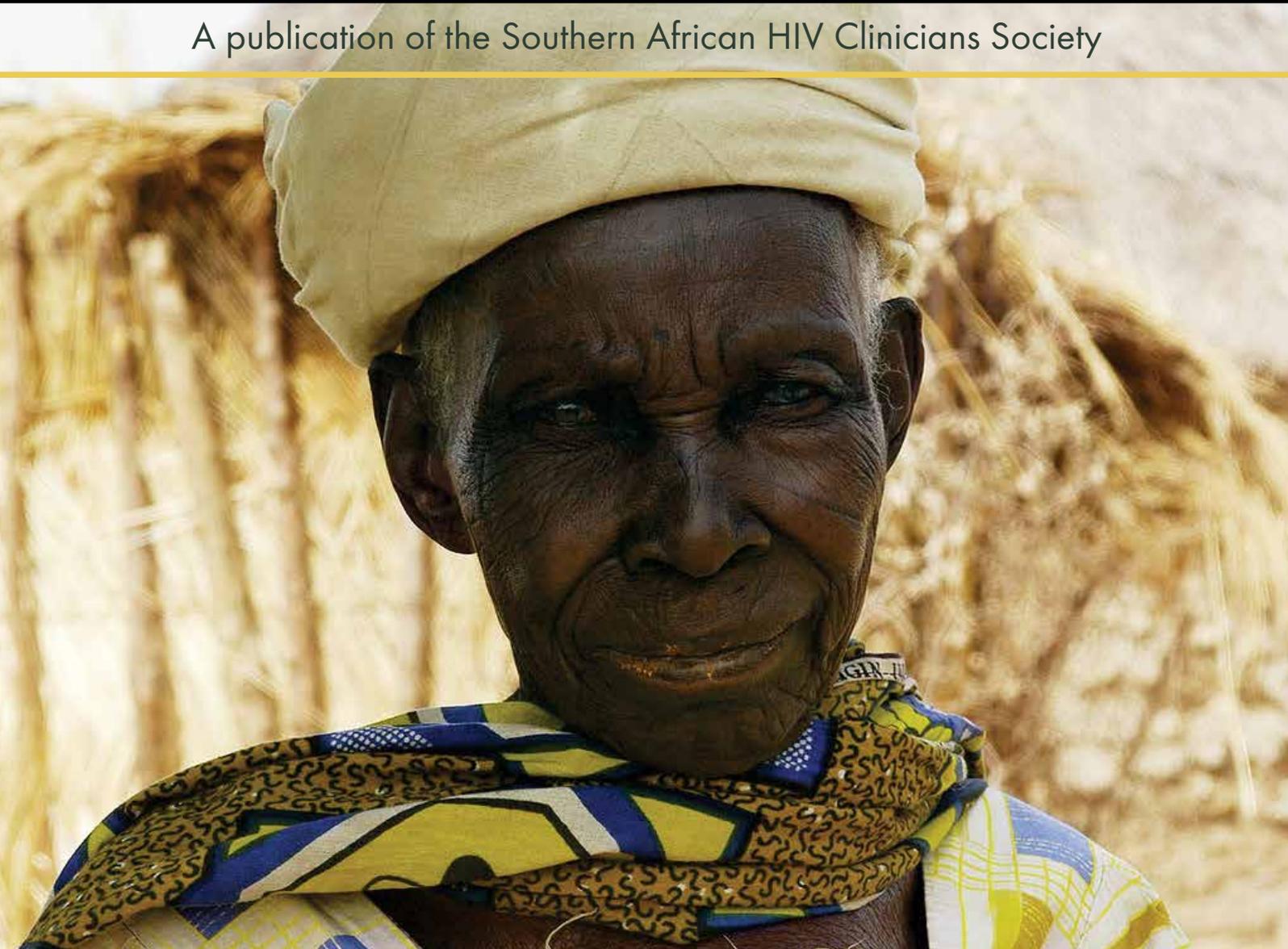


HIV Nursing matters

A publication of the Southern African HIV Clinicians Society



How long can I live if I get HIV?

HIV and ageing

Inflamm-ageing in HIV

December 2014 Volume 5 No. 4





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• T H R • M O N U M E N T • T R U S T •

guest editorial



Dr Moeketsi Mathe
MB ChB, ATLS, Dip HIV Man (SA)

HIV and ageing

A lot has changed since the early days of HIV treatment in South Africa: from small NGO or privately funded treatment sites to the big and multiple government treatment clinics we see today. Then, clinics tended to cater for the middle-aged and young primarily, with a smattering of older patients. The challenges we faced were in identifying HIV-positive patients and getting them to start treatment before they died; and indeed the focus was primarily on saving lives. As the epidemic matured and our treatment sites grew, treating other important opportunistic infections, especially TB, became equally important. Again, the focus was on saving lives. However, the face of the typical ARV site has changed and so have the challenges.

A few things are responsible for the changes we see, including:

1. a change in the drugs we use
2. a change in ARV eligibility criteria
3. HIV/TB treatment integration
4. the HCT campaign.

With improved drugs and regimens, our patients are living longer and healthier with fewer adverse effects. As much as that is a good thing, and is of course the point of treatment, it presents new challenges for physicians and nurses. As

a result of growing older, and sometimes even consequent to the drugs we use, patients develop chronic illnesses (and their complications) and we now have to identify these in our ARV clinics. Hypertension, diabetes mellitus, renal failure (acute and chronic) and heart failure are all conditions that we now have to anticipate. In fact, some of our patients are referred to us already suffering from these conditions.

The change in eligibility for ARVs and other chronic disease treatments, in particular renal dialysis, has seen an increase in patients who would otherwise have been relegated to the TLC (tender loving care) pile at a hospice, being seen and actively treated at our clinics. With the use of tenofovir, we have also seen a fair number of patients develop chronic renal failure and require dialysis.

The integration of HIV and TB services has helped to identify cases of HIV infection that may otherwise have gone undiagnosed. Combine this with the change in eligibility criteria, specifically that all TB patients qualify irrespective of CD4 count, and we are now identifying people of all ages, including the elderly. This new subset of patients has changed the face of the ARV clinic.

The HCT campaign has reached people from all walks of life and those who have traditionally being missed during our testing campaigns and by messaging. The MMC (male medical circumcision) campaign has itself identified patients who would ordinarily have been missed by our usual messaging. The benefit of the MMC campaign is not only that it has identified men who are HIV-positive, but that it has certainly had an appreciable effect on the percentage of men visiting our clinics, including elderly men.

This new face of the ARV clinic sees two types of the older patient: those who have been with the clinic for a considerable number of years; and those who enter the system in their twilight years.

The first type is a patient who has been with the clinic since it started. They may have started treatment at death's door and now, years later, are in their early- to mid-50s. They now have a BMI greater than 30 kg/m², hypertension, diabetes and protein⁺⁺ in their urine. Not only is it necessary to treat their HIV with a second-line regimen because they have failed first-line therapy, but also to deal with the side-effects of (most likely) Aluvia and Lamzid and the drug-drug interactions with their anti-hypertensive, anti-diabetes and statin treatment. So now, running an ARV clinic requires more than just knowledge concerning TB, HIV and STIs, but in primary healthcare in general. The clinic's role in the health system becomes much less defined and begins to encroach on the "territory of others".

The second type of patient is referred from another part of the clinic or from the referral hospital. They already have a pre-existing medical condition, which may be so complicated that it can only be treated at a higher-level facility. But, this patient requires ARVs and that's where the ARV clinic come in. So again, general knowledge is required in order to best treat this patient.

The ageing HIV patient is set to change the face of HIV services. The need for an effective and responsive referral system will be paramount to the successful running of any ARV clinic. The shorter the time period from identifying the problem to the patient seeing the appropriate clinician at the referral centre, the better. The more the clinic works hand-in-glove with its referral centre and the more support they give, the better for everyone.

I suppose the question to be answered is: can the current model of an "ARV" clinic continue in the face of the ageing HIV patient? I think not. We started with HIV and TB integration. I think we may need to place HIV and TB where they really ought to be: in the realm of primary healthcare. ®

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Message from the president



Dr Francesca Conradie

*President, Southern African HIV
Clinicians Society*

With all the talk of “the end of AIDS”, does it really mean that the end is in sight? The truth is that there is so long to go before this epidemic is over, I am not sure that we will live to see it. While there have been gains in prevention and treatment, there are still over 6 million South Africans who have HIV. All of them will require treatment until the end of their lives. So we will need to continue to provide care and support for them. What I am saying is that it is business as usual for us. We need to continue to care for all those who are infected. This is a marathon, not a sprint.

This is our final magazine before the end of the year. And what a year it has been. There is no doubt that the Society’s highest point was the conference, with an even better turn out than at our first conference. The conference started on a public holiday and I thought that no one would turn up, but over 600 people attended the opening sessions. The plenaries were of an international standard. The first, with Dick Chaisson, about the elimination of TB showed that while we may be turning the tide on the HIV epidemic, we still have much to accomplish with regards to TB. There were thought-provoking debates that, I thought, at times might end in fisticuffs (academic of course)! While we focussed on the clinical aspects of HIV, we received many positive comments about the ethics slots. Skills-building sessions were not infrequently oversubscribed. ®

In The NEWS

2014 SA HIV CLINICIANS SOCIETY CONFERENCE REPORT

DIAGNOSING, TREATING AND MANAGING CO-MORBIDITIES IN AN AGEING HIV POPULATION

Marietjie van den Berg, *Editor: HIV News*

While the introduction of antiretroviral therapy (ART) and improved treatment regimens have significantly reduced mortality in HIV-infected patients over the past decade, there is still a substantial difference in the life expectancy of these individuals compared to the general population.

However, the curve is shifting, particularly in countries where ART was introduced earlier than in South Africa, resulting in a growing elderly HIV-positive population. But, despite living longer, this population is facing a myriad of new challenges relating to their increased risk of developing co-morbidities at a younger age than people without the disease. Some of the most common morbidities associated with HIV include impaired renal function, cardiovascular disease, lipodystrophy, osteoporosis, cervical cancer and neurological disease. It is suspected that HIV patients' increased risk of developing these morbidities and chronic diseases is caused by incomplete suppression of chronic

inflammation despite highly active antiretroviral therapy (HAART).

"After adjusting for traditional risk factors, inflammatory biomarkers remain elevated during long-term ART, and are strongly predictive of disease progression," said Steven Deeks, Professor of Medicine, University of California in San Francisco.

An analysis of mortality in patients 1 - 2 years after starting ART at the HIV Clinic at the Helen Joseph Hospital, showed that older patients have a significantly higher risk of dying than younger patients. In a cohort of 9 000 patients receiving ART, it was found that the risk of not achieving an improvement in the CD4 count of at least 50 cells/ μ L is 3.49x higher in patients aged >60 years than in the younger age group.

"This tells us that we need to make the diagnosis earlier and at a younger age and should stop considering only people younger than 40 years of age as at risk of contracting HIV," said Prof.

Ian Sanne, Associate Professor: Internal Medicine and Infectious Diseases, University of the Witwatersrand and Managing Director of Right to Care.

Apart from earlier diagnosis and treatment in a bid to increase life expectancy, management of the disease should also focus on the prevention of risk factors that could contribute to the early development of co-morbidities in HIV. These include obesity, cigarette smoking and uncontrolled diabetes, hypertension and cholesterol.

"Healthy ageing in HIV patients requires aggressive risk factor

Healthy ageing in HIV patients requires aggressive risk factor management, exercise and diet as it is much easier to prevent age-associated complications than to reverse them.

management, exercise and diet as it is much easier to prevent age-associated complications than to reverse them," noted Prof. Deeks.

In addition, treating physicians should be aware of the potential side-effects of some of the drugs in certain patients. Apart from the fact that HIV can cause HIV-associated nephropathy, some ARVs may have renal side-effects which can lead to renal failure in the longer term. It is therefore of critical importance that renal function is assessed at baseline, and patients with impaired renal function are identified and put on alternative treatment regimens or that dose adjustments are made when treating these patients with agents such as tenofovir," Prof. Sanne pointed out.

Dr Mark Nelson, director of HIV services at the Chelsea and Westminster Hospital in London emphasised that an ageing HIV population is not homogenous and that their risk factors are different. Individually tailored and patient-centred care and a focus on avoiding drug interactions are therefore important considerations in the treatment and management of these patients. However, adherence remains paramount in improving not only life expectancy, but also quality of life.

"Once-a-day therapy does improve adherence and is associated with a greater rate of virological success. It improves quality of life, is more acceptable to the patient and reduces healthcare costs. However, adherence remains incredibly complex and every opportunity should be seized to encourage it," Dr Nelson said.

"HAART has been shown to prolong the life expectancy of HIV patients. But we need to individualise treatment and treat earlier. We need to have a common-sense approach to treatment and be aware that co-morbidities lower CD4 counts. It is therefore all about identifying and dealing with those risks and realising that treatment will require these patients to take more medication in addition to ART, which could impact on adherence because of potential drug-drug interactions," Dr Nelson concluded. [®]



Strategic Plan for Nursing Education, Training and Practice

Nelouise Geyer, *Nursing Education Association*

Introduction

The second Nursing Strategy launched in March 2013 was the culmination of a lengthy consultation process with a variety of nursing stakeholders. The consultation was initiated at provincial level by a planning committee prior to the Nursing Summit hosted by the Department of Health in April 2011. The Summit involved the participation of more than 2 000 nurses, following which a compact was compiled summarising the wishes of the profession for its reconstruction and revitalisation. This compact was then utilised by a Ministerial Task Team appointed by the Minister during 2012 to amend the 2008 Nursing Strategy to address the current healthcare needs of the country. The first draft of the revised strategy was consulted again during 2012, finalised and launched in 2013.

Based on the input from the Summit and the consultation processes, the following items were highlighted as the most urgent issues to be addressed in order to revitalise the profession and to be able to respond to healthcare needs effectively in a country with a nurse-driven healthcare system:

1. nursing education and training
2. resources in nursing

3. professional ethos and ethics
4. governance, leadership, legislation and policy
5. positive practice environments
6. compensation, benefits and conditions of employment
7. nursing human resources for health.

So what is the progress?

The *Strategic Plan for Nursing Education, Training and Practice* provides a framework for the revitalisation of the profession. Progress has been made on several fronts and this article shares some of these. The information in the Nursing Strategy is not repeated here as it is freely available on the internet on the websites of the Department of Health (DoH) and other organisations.

Appointment of the Chief Nursing Officer (CNO)

The appointment of the CNO in January 2014 represents a very important milestone for nursing and midwifery in this country, as nursing organisations have lobbied for many years to get this position instituted in line with international, in particular World Health Organization (WHO), standards. The DoH is the custodian of the Nursing Strategy and it will be

implemented and co-ordinated through the office of the CNO. To this end, the CNO has met with stakeholders, and hosted a two-day workshop in September 2014 to address the way forward on the Nursing Strategy, and to address the urgency of the changes required in nursing education and training.

Nursing education and training

The majority of the changes have been taking place in nursing education and training and will be discussed under separate headings.

Legislation for higher education

Prior to the Nursing Strategy being launched, the Higher Education Act No. 101 of 1997 determined that nursing programmes are higher education qualifications, which now gives nursing training the same status as the educational preparation of other professions. Based on the determination in the Constitution of the RSA, Act 108 of 1996, higher education is a national competence which will be managed at national level by the Department of Higher Education and Training (DoHET).

While the educational preparation of nurses is already available at

universities, which are higher education institutions (HEIs), nursing colleges and other nursing education institutions where the bulk of the professional nurses are prepared for practice have to be accredited as HEIs in order to offer the new programmes. At the moment, all colleges offering the R425 to train professional nurses have agreements with universities to provide oversight and mentoring on the quality and standards of education and training. These agreements would not be suitable for the future needs of nursing education, and colleges would have to meet the criteria of both the Council for Higher Education (CHE) and the SANC to be accredited as HEIs. This implies a massive change at these institutions as public colleges are currently managed as provincial entities with very different conditions. While a political decision has been taken that public colleges will remain under provincial management, they will function in the higher education sphere and a national education policy is being developed to support this decision. The NEPI (Nursing Education Partnership Initiative), a PEPFAR initiative, will assist with this transition. At the same time that the Nursing

Strategy was launched, a whole range of new regulations for nursing education and training was published for implementation.

Nursing Education programmes

Regulations for the new nursing programmes as higher education qualifications were published, which will replace the current programmes in nursing which are referred to as legacy programmes. The legacy programmes will phase out over a number of years to counteract the challenge of creating further nursing shortages during the transition, while the new programmes are phased in from 2016 as summarised in the table below.

The programme for enrolment as a nurse will not be continued and a brand new category, namely the Staff Nurse, will be introduced in 2016. This presents a challenge for employers as they have to plan for future inclusion of a new category of nurse that fits in between a professional nurse and the current enrolled nurse – as the enrolled nurse category will be with us for many years to come. The question needs to be asked whether employers are ready

to do this by the end of 2019 when the first students are due to complete their programmes. For unit managers in clinical practice, the various categories of nurses will present a supervisory challenge, as the enrolled categories trained on the legacy programmes will remain subject to supervision by a professional nurse.

Student status

Students in nursing have to comply with the entry requirements for higher education in future and will enjoy full student status, but will be required to undertake clinical practice not only for learning, but also for role taking, i.e. full participation in the nursing team to deliver nursing/midwifery care during different times of the day to comply with the SANC requirements. Funding models will be developed to support students during training.

Clinical Model for Clinical Education and Training

The Clinical Model for Clinical Education and Training has been implemented by various nursing education institutions with a view to improve clinical preparedness

Programme	End of enrolment	End of qualification	Replaced by	First date for enrolment
R425 (4-year programme)	January 2018	December 2018	R174 (Professional nurse and mid-wife)	January 2016 for those who are ready to start
R683 (Bridging programme)	January 2017	31 December 2020	No replacement	
R2175 (Enrolment as a nurse)	30 June 2015	2-year teach out period: 2017	No replacement	
R2176 (Enrolment as nursing auxiliary)	30 June 2015	2-year teach out period: 2017	R169 (Nursing auxiliary)	January 2016 for those who are ready to start
R171 (Staff nurse)				
R254 (Registration as a midwife)	None	None		
R880 (Registration as a psychiatric nurse)	None	None		
R48 (Registration as clinical nursing science, health assessment, treatment and care specialist)	None	None		

of students on completion of their education and training programmes.

Resources in nursing

With regard to the resources in nursing, most of the developments have been taking place at individual level at nursing education institutions. The CNO office has been provided with support by a delegate seconded by UKZN, as well as a project manager funded by PEPFAR. Provincial DOHs that do not have a provincial nursing officer in place are encouraged to appoint such a person to complete this structure. The private sector has similar positions governing nursing in their respective sectors. The infrastructure at some public nursing colleges is scheduled to be undertaken and have been completed.

Professional ethos and ethics

Professional ethos and ethics are also being addressed by employers and professional organisations. The proposed Continuing Professional Development (CPD) programme that the SANC is developing includes a component to address these.

Governance, leadership, legislation and policy

Leadership development is provided by professional organisations and some employers to strengthen leadership in the profession.

Legislation and policy have made progress and are indicated under the discussion of the revitalisation of nursing education and training. Furthermore, the revised Acts and Omissions (R 767 of 2014) has been published following public consultation in 2012. However, the way that this regulation was finalised appears to be problematic for some stakeholders and they have started to raise some concerns. CPD has been raised under a few sections in the Nursing Strategy as an initiative that should be implemented as soon as possible. The SANC has initiated the development of a CPD system for nurses in this country. In a nutshell, this system will consist of 15 points collected

annually with all nurses submitting an annual declaration to SANC whereafter they will do an audit on a sample of nurses to investigate whether they did attend all the declared activities. Points collected have to comply with updating in one's area of practice (6 points), ethics and law (4 points), leadership and management (3 points) and education and research (2 points). Allocation of points for events attended will be: 1 point for attendance and observation (e.g. attending a workshop), 2 points for actioning (such as facilitating a workshop) and 3 points for developing a product (e.g. a workshop). The system will be piloted during 2015 in two provinces, following which it will be finalised and published for implementation. Once finalised, in future, no practising certificate will be issued before the annual declaration has been received.

Positive practice environments (PPEs)

No new initiatives have been launched other than the PPE campaign of DENOSA and SAMA that is running at provincial level. The DoH has implemented the National Core Standards, but these does not sufficiently address nursing and midwifery practice.

Compensation, benefits and conditions of employment

Compensation and the benefits of employment, including the OSD, are under discussion at the various negotiating fora between employers and unions. Many employers including, the state sector in some provinces, have implemented the white uniforms for nurses.

Nursing human resources for health

The development of norms and standards for nursing was initiated during the work of the Ministerial Task Team and continued thereafter. While the progress on the staffing norms has continued, information on the progress is limited. Reportedly, the work on staffing norms is continuing at provincial level and is considering the whole healthcare

team and not only nurses. The WISEN tool of the WHO is used by the DoH to guide this work.

Conclusion

In conclusion, there is progress with the implementation of the Strategic Plan for Nursing Education, Training and Practice. There is a need to co-ordinate the progress happening in different spheres. Hopefully, this is a task that will be undertaken by the office of the CNO as soon as proper infrastructure is established. ®

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13 October 2014

To all public health nurses, doctors and managers

CIRCULAR: CHANGES IN THE PRESCRIPTION OF PROGESTIN SUBDERMAL IMPLANTS (IMPLANON) IN WOMEN WHO ARE TAKING ENZYME INDUCING DRUGS SUCH AS EFAVIRENZ FOR HIV, RIFAMPICIN FOR TB, AND CERTAIN DRUGS USED FOR EPILEPSY (CARBAMAZEPINE, PHENYTOIN, AND PHENOBARBITAL)

New evidence has emerged that certain enzyme inducing drugs, including efavirenz for women who are HIV positive; rifampicin for women who have TB; and carbamazepine, phenytoin, and phenobarbital for women with epilepsy can interfere with the action and effectiveness of progestin subdermal implants.

It is therefore recommended:

- 1) **Women who are on the enzyme inducing drugs listed above should not use progestin subdermal implants (Implanon) but rather use another method, e.g. intrauterine devices or depot medroxyprogesterone acetate (DMPA). The effectiveness of combined oral contraceptives may be impaired by the enzyme inducing drugs, but could be used together with condoms if the women prefer this method.**
- 2) **Women who are HIV infected and on efavirenz, or who are epileptic and on carbamazepine, phenytoin, or phenobarbital, and already have the progestin subdermal implants (Implanon) inserted should be covered with another non-hormonal contraceptive method (intrauterine devices or condoms). They should be given the option of having the progestin subdermal implants (Implanon) removed and replaced with an alternative method as in 1) above.**
- 3) **Women who are infected with TB and on rifampicin and already have the progestin subdermal implants (Implanon) inserted should be covered with another non-hormonal contraceptive method (e.g. intrauterine devices or condoms) for the duration of their TB treatment.**

For more information please contact Dr Pearl Holele on Holelp@health.gov.za or 012 395 9736 or Dr Zuki Pinini on PininZ@health.gov.za or 012 395 9157 in the National Department of Health.


DR Y PILLAY

DEPUTY DIRECTOR-GENERAL: HIV/AIDS, TB AND MCWH

DATE: 16/10/14

Exciting new HIV prevention products in pipeline

By **Kerry Cullinan** on November 3, 2014 in *HIV/AIDS, HIV/AIDS Prevention*



Vaginal rings filled with antiretrovirals (ARVs), ARV injections and partially effective vaccines are some of the HIV prevention weapons under development.



Nonthando Kewana will soon know if her monthly trips to the Emavundleni Research Centre in Crossroads have made history.

For almost 2 years, 25-year-old Kewana has been paying monthly visits to the centre to get a vaginal ring that slowly releases an antiretroviral into her body.

She is part of the final phase of a big clinical trial, and researchers expect to know by mid-2015 whether the ring can protect women from HIV.

"I was scared when I saw the ring, and I thought it might go all around my body but I don't even feel it," Kewana said this week, as she waited for her monthly appointment. "My partner also can't

feel it." The ring is a white, silicone hoop about the size of the circle made when a woman's thumb and forefinger join up.

Over 3 000 women around the continent are involved in the ASPIRE trial, which is testing whether the ARV called Dapivirine can protect women from HIV through the simple ring that stays in place for a month.

"I decided to come here to see if I can protect myself from HIV, because I am so scared of it," said Kewana, who witnessed her older sister die of AIDS. Emavundleni is part of the Desmond Tutu HIV Foundation headed by world-renowned HIV expert Professor Linda-Gail Bekker.

"This area encapsulates the worst of

Cape Town's HIV epidemic, with about 28 - 30 percent of pregnant women testing HIV-positive," said Bekker this week. "HIV is particularly high in the very informal parts, where people are newly urbanised and don't have ready access to healthcare. That is why this research has to happen here."

The centre was set up 10 years ago in a shipping container and has since grown into a two-storey building. Researchers have worked very hard to win the trust of community members and encourage them to take part in a number of HIV trials. Currently, over 500 people from Crossroads and Nyanga are involved in various HIV and TB prevention trials.

New HIV prevention trials to take science out of lab and into communities

This week, the globe's leading brains researching biomedical ways of preventing HIV met in Cape Town for the inaugural HIV Research for Prevention conference.

"We have six and a half million people living with HIV in South Africa, and treating them with ARVs for the rest of their lives is an enormous public health undertaking," said Bekker. "There is an urgency to turn off the taps [of infection] and come up with new prevention methods."

Using ARV medication to prevent – not just treat – HIV is emerging as one of the most powerful weapons to contain the epidemic in the absence of a vaccine. "I decided to come here to see if I can protect myself from HIV, because I am so scared of it."

ARVs taken immediately after HIV exposure – in rape cases or when healthworkers are injured by needles while treating HIV-positive patients – have been known to prevent HIV.

Three years ago, the results of Dr Myron Cohen's 10-year study of couples where one person was HIV-positive and the other -negative, were released. The study found that if the HIV-positive partner was on ARVs and their viral load was undetectable, their negative partner was 96 percent protected from HIV infection.

A number of "treatment as prevention" studies have also shown that ARVs taken shortly before sex by people at high risk of HIV offer protection against HIV. For example, Truvada, a pill that combines the ARVs tenofovir and emtricitabine, reduced HIV transmission in gay men by 42 percent.

Long-acting injections containing ARVs that would only have to be given every 2 - 3 months are also in the pipeline, and one of these will be tested at Emavundleni from February.

These injections would make it much easier for people to adhere to treatment and are also being tested to see whether they can protect HIV-negative people from the virus.

Wits University's Professor Helen Rees, who was a conference co-chair, said it was more realistic to control rather than eradicate the HIV epidemic at this stage.

However, the long-term aim is still a vaccine to prevent HIV, and there are some exciting developments.

Six years ago, the world heard the results of the only vaccine that showed any protective effects, protecting around one-third of Thai people in a huge trial.

For the past 2 years, the same Thai vaccine has been tested on 100 South Africans – and despite being much fatter than their Thai counterparts, their immune systems also reacted to the vaccine in the same way.

The vaccine is now being modified to contain the strain of HIV most common in South Africa, and by January, 200 more South Africans will be vaccinated with it. But it could leapfrog into a massive R1-billion trial within a year if the people respond according to the Thai trial.

"We have already set our 'go or no go' criteria based on the Thai trial and if we meet these, we can go straight into a Phase 3 trial of 7 000 people by the end of 2016," said Medical Research Council President Dr Glenda Gray.

The Thai trial combined two vaccines. The first aimed to prime people's immune systems to recognise the types of HIV most common in Thailand (sub-types E and B) and the other, injected later, aimed to boost their immune systems to fight infection.

The "primer" vaccine now has to be modified to contain HIV sub-type C, which is most common in South Africa.

Discussions have already been held with the Medicines Control Council to license the vaccine by 2019 if the Phase 3 trial goes well, and also to vaccinate children along with the current HPV vaccine to prevent cervical cancer, said Gray, who added that even if the vaccine only gave 50 percent protection, government would probably still license it.

Given the trickiness of HIV and the diversity of people's sexual practices, HIV researchers say they want to be able to develop a range of different HIV-prevention products – including perhaps a partially protective vaccine.

Edited versions of this article first appeared in the *Saturday Star* and *Weekend Argus* newspapers. ®



“Oupa and Ouma, how come you have HIV?”

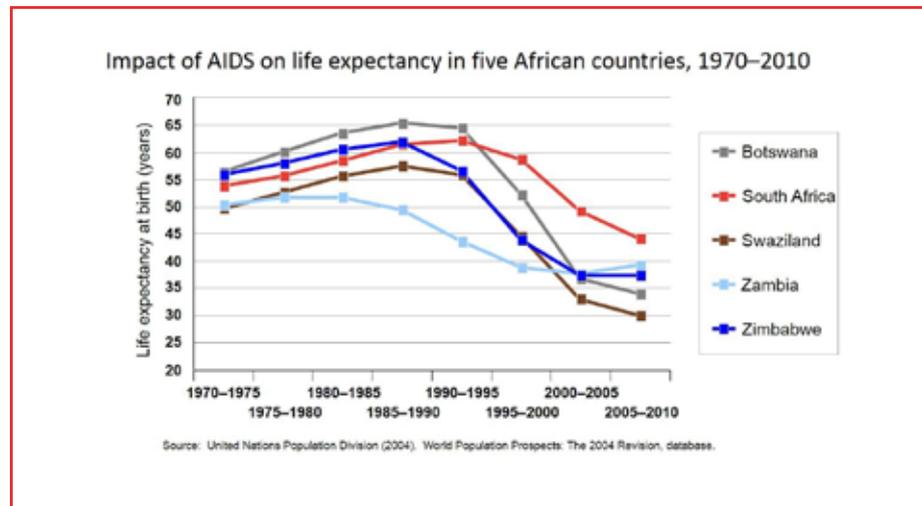
*Getting old on antiretrovirals: Cardiovascular-,
neoplastic- and ageing-related illness*

Francois Venter

Even in HIV-negative patients, health can decline after 40 due to poor lifestyle choices, such as a lack of exercise and proper nutrition. It is thought that this is exacerbated in patients with HIV.



How long will people with HIV live?



As ARV coverage increases, so does the life expectancy of people who are living with HIV. UNAIDS refers to those over the age of 50 years living with HIV as the “previously hidden dimension of the HIV epidemic”, and they represent new challenges in terms of HIV management and care. It is estimated that the South African HIV prevalence was 13% among people aged 50 - 54 years, and 12% among women in 2012.

What are the implications of this?

Life expectancy in South Africa is increasing, and new epidemics are becoming more apparent, such as chronic diseases. Older people may have weaker immune systems and some research suggests that they may be less likely to take an HIV test, or that screening efforts are not directed at older individuals because they are perceived to be at a lower risk. Early diagnosis is important, and all older patients should be offered HIV

counselling and testing. Counselling on prevention is also important due to the fact that men and women over 50 are also acquiring new infections.

Although conventional thinking is that the side-effects of ART could drive mortality, this may not be true. In fact, as people with HIV age, they may begin to show signs of non-HIV-related malignancies, chronic illnesses such as kidney and liver disease and cardiovascular mortality. This is due to generalised immune activation, fibrosis of lymphatic tissue, less control of oncogenic pathogens, chronic inflammation and HIV-associated kidney disease.

Promote a healthy lifestyle in patients

Even in HIV-negative patients, health can decline after 40 due to poor lifestyle choices, such as a lack of exercise and proper nutrition. It is thought that this is exacerbated in patients with HIV. Regardless, in

ageing patients it is critical to manage co-morbidities and advise on how to live a healthier lifestyle. Some tips for patients include:

- control blood pressure
- regulate blood glucose
- control blood lipids and cholesterol
- stop smoking
- be active
- participate in cancer screenings
- get regular immunisations
- prevent bone loss and muscle weakness
- combat depression
- maintain social contact.

In the case of promoting ageing with HIV, viral suppression after early diagnosis is key. Particular attention should also be paid to managing depression, aggressive risk factor management, TB prevention (INH prophylaxis) and overall, quality of life. The aim is to help older people living with HIV to live well and enjoy life. ®

How long can I live if I get HIV?

A translational approach to HIV treatment and management

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LifeSense Disease Management; Managing Editor, AIDS.about.com



According to research published in 2012, patients receiving a single pill per day were significantly more likely to reach a 95% adherence threshold versus patients receiving three or more pills per day. Furthermore, patients receiving a single pill per day were 24% less likely to have a hospitalisation than their counterparts taking two or more pills.

The first question most patients will ask upon receiving an HIV-seropositive diagnosis is: "How long have I got to live?" The answer is both simple and not-so-simple.

The simple answer is that, by and large, the outlook is extremely positive. With the proven effectiveness of modern combination antiretroviral therapy (cART), people with HIV can expect to live longer and healthier lives than ever.

A more quantitative response is dependent upon several factors, the major ones being:

- early detection and treatment of HIV
- sustained and complete suppression of HIV viral activity, which is heavily reliant upon life-long, uninterrupted adherence to cART.

HIV is a very different disease compared to what it was just 10 years ago, with current generation ARVs offering lower pill burdens, fewer side-effects, easier adherence, and far superior drug-resistance profiles to previous-generation drugs.

Because of this, a 20-year-old, HIV-positive individual starting cART in the US or Canada can today expect to live into his/her early 70s, according to data from the North American AIDS Cohort Collaboration on Research and Design (NA-ACCORD).^[1] The UK Collaborative Cohort Study (UK CHIC) had similar findings, with life expectancy approximating that of the general population.^[2]

In fact, according to a 2014 update by the Multicenter AIDS Cohort Study (MACS), patients with HIV who start cART at CD4 counts >350 cells/ μ L may be able to achieve a life expectancy equal to or even greater than that of the general population.^[3]

In light of the overwhelming evidence that early cART can significantly reduce HIV-associated morbidity and mortality, the World Health Organization (WHO), in their consolidated 2013 guidelines, recommended that all HIV-infected individuals with a CD4 count <500 cells/ μ L be provided cART irrespective of WHO clinical staging.^[4]

In response, the South African Department of Health announced in July that it would bring its own initiation guidelines in line with those of WHO starting in January 2015.^[5]

The success of this expanded treatment strategy is reliant upon numerous interrelated factors, including: early identification of infection; effective linkage to care; uninterrupted

availability and distribution of ARVs; stronger (and potentially novel) adherence monitoring methodologies; consistent, quality patient-provider interaction; and sustained retention in care.

Rationale for the early initiation of cART

CD4 count at the time of cART initiation remains one of the strongest indicators of life expectancy in a person living with HIV. Starting therapy at a CD4 count below 350 cells/ μ L correlates to a quantitative reduction in life-years. Simply put, as the CD4 continues to dip beneath the 350 threshold, so, too, does life expectancy – by as much as 22 years, according to an analysis of the NA-ACCORD data.^[6]

Similarly, a patient's CD4 nadir (the lowest historic point to which the patient's CD4 count has dropped) is predictive of long-term morbidity, with lower values suggesting an increased risk of HIV-related and non-HIV-related illnesses, as well as slower immune recovery.

Furthermore, delaying treatment by more than 1.5 years upon reaching the recommended initiation threshold of 350 - 500 cells/ μ L resulted in the equivalent of 10 lost life-years among study participants.^[7]

The impact of adherence on patient life-years

According to data from the UK CHIC Study, people with undetectable viral loads who achieved a CD4 count of 350 cells/ μ L or more within a year of starting therapy are likely to have a normal life expectancy.^[8]

Conversely, failure to achieve viral suppression reduced life expectancy by as much as 11 years^[9] – roughly equivalent to smoking 40 cigarettes per day.

Starting therapy at a CD4 count below 350 cells/ μ L correlates to a quantitative reduction in life-years.

A retrospective analysis conducted in 2013 by the University of Montreal further concluded that persons who had “near undetectable” viral loads for a period of 6 months (i.e. between 50 and 199 copies/mL) had nearly a 400% greater risk of virological failure within a year than those able to achieve complete viral suppression. The study, which monitored 1 357 HIV-positive men from 1999 to 2011, further demonstrated a virological failure rate of nearly 60% in persons with persistent viral loads of between 500 and 999 copies/mL.^[10]

Pill burden and life expectancy

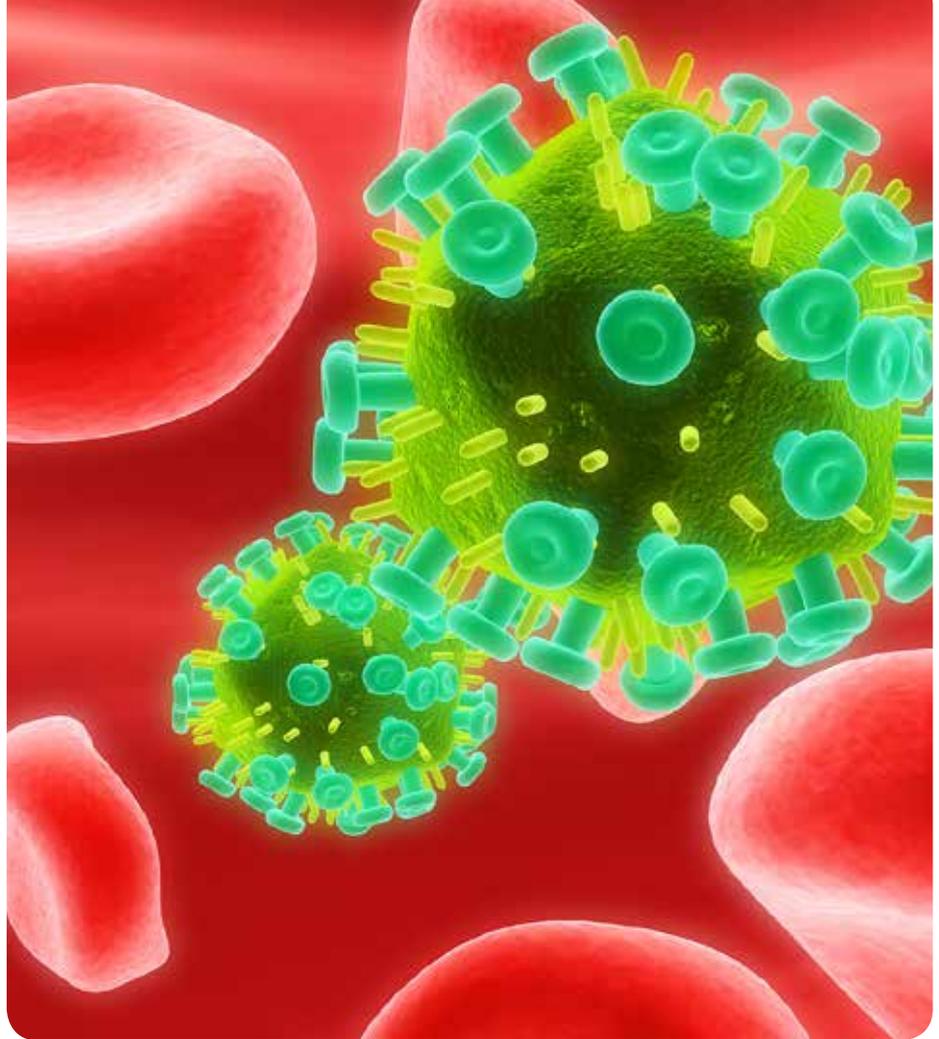
The increased availability of fixed-dose combination (FDC) drugs is seen as a major advance in ensuring treatment adherence, with greater acceptance of the “single-pill option” by the general population.

According to research published in 2012, patients receiving a single pill per day were significantly more likely to reach a 95% adherence threshold versus patients receiving three or more pills per day. Furthermore, patients receiving a single pill per day were 24% less likely to have a hospitalisation than their counterparts taking two or more pills.^[11]

The impact of HIV co-morbidities on longevity

Ultimately, longevity can only be determined by the cumulative factors that either increase or decrease life expectancy in a person with HIV. These factors range from things we can control (such as treatment adherence or lifestyle choices) to things we can't (such as race or economic status).

Furthermore, the proper treatment and management of HIV is only part of the game. Even for people able to maintain full viral suppression, the risk for the development of non-HIV-related co-morbidities, such as cancer or heart disease, is far greater



that of the general population, and generally develops 10 years earlier than people who don't have HIV.^[12] So profound are these concerns that, in the developed world, a person living with HIV is far more likely to die prematurely of a co-morbid condition than an HIV-related one.^[13]

Beyond mere identification of co-morbidities, greater emphasis needs to be placed on the management of lifestyle factors, which includes not only adherence rates, but issues such as smoking, exercise, diet, alcohol intake, and substance abuse – all of which impact the preservation or deterioration of a person's immune function.

As an example, a 2013 study from the Department of Infectious Diseases at the University at Copenhagen showed that HIV-infected smokers in the developed world lose more life-years to smoking than to HIV. In fact, the risk of death from smoking is twice as high among smokers with HIV than those

without HIV. When compared to non-smoking people with HIV, smokers with HIV cut as much as 12 years from their lives, irrespective of HIV or treatment status.^[14]

Therefore, proactively addressing both HIV-related and non-HIV-related health issues is vital in ensuring not only long life, but long quality of life in people with HIV.

Furthermore, patient outcomes are directly related to both the quality and frequency of care, with increased patient-provider interaction correlating to higher levels of drug adherence and disease avoidance. Retrospective analyses from the US Department of Veteran Affairs have shown that, among a cohort of 2 619 HIV-positive men, patients with one doctor visit per year were 94% more likely to become ill or die over a 5-year period than patients with four visits per year.^[15] 

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HIV and ageing

Mojapele Virginia Maserame, BNSC (Hons)
SAfAIDS



An increasingly significant trend in the global HIV epidemic is the growing number of people aged 50 years and older who are living with HIV. Very few HIV strategies in low- and middle-income countries currently address this previously hidden dimension of the HIV epidemic, yet populations 50 years and older hold important implications for HIV responses.

- Worldwide, an estimated 3.6 [3.2 - 3.9] million people aged 50 years and older are living with HIV.
- For the first time since the start of the HIV epidemic, 10% of the adult population living with HIV in low- and middle-income countries is aged 50 years and older.
- In 2012, there were an estimated 2.9 [2.6 - 3.1] million people aged 50 years and older living with HIV in low- and middle-income countries.
- In high-income countries, approximately 30% of all adults living with HIV are aged 50 years and older.

The proportion of adults living with HIV and aged 50 years and older has increased in all regions, at varying rates, since 2007.^[1]

According to UNAIDS, This “ageing” of the HIV epidemic is mainly due to three factors:

- the success of ART in prolonging the lives of people living with HIV
- the decreasing HIV incidence among younger adults shifting the disease burden to older ages
- the often unmeasured, and thus often overlooked fact that people aged 50 years and older exhibit many of the risk behaviours also found among younger people.

Relatively few HIV surveys have been conducted among individuals aged 50 years and older, but those available reveal high HIV prevalence. In a 2012 national HIV survey in South Africa, for example, HIV prevalence was

13% among people aged 50–54 years, and 12% among women and 6.9% among men aged 55–59 years (compared to 18% among men and women aged 15 - 49 years). A 2006 - 2007 national population-based survey in Swaziland found that 13% of men and 7% of women aged 60 - 64 years were living with HIV (compared to 27% among men and women aged 15 - 49 years). In Kenya, HIV prevalence was 5% among people aged 50 - 64 years (compared with 7.4% in people aged 15 - 49 years). In a study in Mpumalanga Province in South Africa in 2010, HIV prevalence was 35% among men aged 55 - 59 years and 27% among women of the same age. HIV prevalence was 20% among men aged 60 - 64 years, and 17% among men aged 65 - 69 years, while among women in the same age groups it was 13% and 10%, respectively.^[1]

HIV prevention including testing services- and other services, such as tuberculosis screening - need to place increased emphasis on people 50 years and older and their specific realities and needs.^[2] Biological changes are among the factors that can also put sexually active women aged 50 years and older at high risk of acquiring HIV. According to Drew and Sherrard (2008), as quoted by UNAIDS,^[1] the thinning of the vaginal wall after menopause, for example, increases the chances of lesions and tears, thereby increasing the risk of HIV transmission during sex.

It is clear that widening access to ART (and the larger proportions of people who are starting treatment earlier and with higher CD4 cell counts) is leading to an increase in the number of people living with HIV aged 50 and older. In high-income countries, the life expectancy of a person living with HIV who achieves and maintains viral suppression on now ART approaches that of a person who has not acquired HIV.^[3] Between 2009 and 2011, life expectancy at birth in

South Africa overall was estimated to have increased from 56.5 to 60 years - largely due to the rollout of ART and prevention of mother-to-child transmission of HIV programmes.^[1]

HIV testing and treatment services therefore need to address the possibly distinct needs and realities of populations 50 years and older who are living with HIV. Timely initiation of ART is especially important because the immune systems of people over age 50 tend to recover more slowly compared with younger people. Yet, research in sub-Saharan Africa suggests that people aged 50 years and older may be less likely to take an HIV test compared with people under the age of 50. Consequently, this population also appear likely to be diagnosed late in the course of HIV infection, often after their health has deteriorated considerably - as has been found in Brazil, for example.^[1]

ART in people aged 50 years and older can pose special challenges e.g depression. Older HIV-positive adults confront both the process of ageing and managing their HIV. The potential challenges of consistent ART adherence in HIV-infected older adults are complex and ever-changing. Many HIV-infected older adults experience chronic health conditions, such as cardiovascular disease, cancer, osteoporosis, hypertension, kidney failure and liver disease, all of which can complicate their HIV treatment and efforts to adhere to ART regimens.^[4] Managing multiple co-morbid conditions, including HIV, requires adherence to complex and burdensome pill regimens consisting of HIV-specific and non-HIV-specific medications. In older adults with HIV, as in their younger counterparts, high levels of psychological distress are common. According to AIDS Care (2010), depression was the second-most prevalent behavioural health issue among HIV-positive adults, and the prevalence of depression among HIV-positive adults was estimated to

be 36%. A wide range of depression rates in HIV-positive adults have been reported (1 - 48%). The association between HIV and depression has been attributed to multiple factors, including poorer cognitive and physical function due to HIV or treatment side-effects, HIV-related stigma and social isolation/loneliness. These factors may be exacerbated in older adults, as they face physical and mental challenges inherent in ageing processes.^[5]

Providing HIV treatment can be challenging if the person living with HIV is also experiencing other chronic conditions. In a South African study, 30% of the people 50 years and over had two or more chronic conditions. While there is evidence that people over 50 are more likely than their younger counterparts to adhere to ART, there is also evidence that adherence can suffer when individuals are experiencing several chronic conditions at the same time.^[1] Mortality among people aged 50 years and older was higher than in younger people, suggesting the need for more attention in HIV-treatment programmes.^[1]

For patients who are motivated to take therapy and who have access to lifelong treatment, AIDS-related illnesses are no longer the primary threat, but, a new set of HIV-associated complications have emerged, resulting in a chronic disease that for many will span several decades of life. Treatment does not fully restore immune health; as a result, several inflammation-associated or immunodeficiency complications such as cardiovascular disease and cancer are increasing in importance. Concerns are growing that the multi-morbidity associated with HIV disease could affect healthy ageing individuals and overwhelm some healthcare systems, particularly those in resource-limited regions that have yet to develop a chronic care model fully. As people living with HIV live longer (due to ARVs), issues of ageing are gaining more attention from HIV

and AIDS researchers, clinicians and advocates.

Poor quality of life can significantly affect medication adherence, as well as patient-directed healthcare decisions that are an integral part of multi-morbidity management. Sexual dysfunction can be a side-effect of medications, be associated with a past medical/surgical history, or sexual abuse, as well as the oppressive effects of stigma. The successful integration of sexual healthcare can decrease morbidity and mortality, and enhance patient well-being and longevity.^[6]

People aged 50 years and older are a growing part of the HIV epidemic and this requires new responses. Many people with HIV are living longer, more active lives thanks to the expansion of effective ART. Fewer younger people aged 15 - 49 years are newly acquiring HIV, which means that people aged 50 and older are a growing HIV demographic. People in this age group share many of the HIV risk behaviours seen among younger people. HIV responses therefore need to account for this important demographic by reflecting risks and trends and providing appropriate prevention, testing and treatment services. HIV services for people aged 50 or older would be integrated helpfully with non-communicable disease screening and treatment as well as other age-appropriate health services.^[1]

These changes in the HIV epidemic are a reminder that the epidemic defies a single, universal approach and continues to demand solid knowledge and focused responses. A more general prevention message should be given at each visit to all patients. Developing a routine way to elicit the patient's sexual history that avoids judgemental attitudes and asks the patient for permission to discuss sexual function will make it easier to gather the necessary information. 

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The new epidemic- ageing and

HIV

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For many years, the medical profession in South Africa has focused on the treatment of HIV and AIDS. This is appropriate, since in 2000, AIDS-related illness was the leading cause of death in both sexes and was responsible for lowering the life expectancy of adults in South Africa.^[1,2] Although HIV, respiratory infections, diarrhoeal disease and especially TB still fall consistently within the top 10 causes of death in South Africa, a number of non-infectious diseases continue to appear in mortality statistics as well. These include, among others, hypertension, diabetes mellitus and non-infectious lung diseases.^[2] As we begin to control the HIV epidemic, it is likely that these non-communicable conditions will start to take an increasingly prominent place.

Increasing numbers of qualifying HIV-positive patients are being commenced on ART. UNAIDS estimates that between 2005 and 2011, the number of AIDS-related deaths declined in South Africa by almost a third (regional fact sheet UNAIDS.org.za): a testament to the effectiveness of the programme and our ability to manage the opportunistic infections associated with declining immunological function. HIV has become a chronic condition and there is a strong likelihood that clinicians treating HIV will see increasing numbers of HIV-positive elderly patients. These patients will be at risk of the same non-communicable diseases that are seen in non-infected patients and it is likely that their outcomes will be substantially worse. This increase in the number of elderly HIV-positive patients, while representing a triumph for the HIV programme, will bring a new set of challenges that we need to prepare ourselves to face.

Inflamm-ageing

Ageing is associated with a decline in immunological function (often referred to as immunosenescence.^[3] Throughout

life, human bodies are subjected to inflammatory stimuli which activate the immune system. These stimuli might be environmental (diet, tobacco smoke, pollution), related to infections (like Epstein-Barr virus) or originate within the human body itself. With age, the immune system becomes less able to accommodate to these stimuli. The increased inflammation seen in ageing is pronounced (it is sometimes referred to as "inflamm-ageing").^[3]

Inflammation, a key component of the immunological response, aims to provide an appropriate response to an infectious threat. This response includes the recruitment of cells to the site of infection that will phagocytose infectious organisms, increased blood flow, increased susceptibility to clotting in the affected area and activation of the adaptive immune response (T- and B-cells) to provide a long-lasting memory and immunity to the infection. Following inflammation, there should be a resolution phase, where tissue is repaired and the immune system is deactivated. Without the resolution phase, immune cells continue to secrete toxic substances including prostacyclins and prostaglandins, chemokines and cytokines and other mediators which can result in tissue damage.

If inflammation is prolonged, the overwhelming activation signals that are sent to the immune cells, such as T-cells, can result in a paradoxical response. One of the mechanisms that has been proposed to explain T-cell depletion in HIV infection is prolonged inflammation resulting from loss of gut integrity and the translocation into the peripheral blood of a number of microbial molecules.^[4,5] These microbial molecules act as danger signals which cause sustained inflammation. CD4⁺ T-cells which are not actively infected with HIV undergo bystander apoptosis.

The CD4⁺ T-cell co-ordinates the adaptive immune response. With T-cell

dysfunction and loss, B-cells and other T-cell subtypes are unable to function. A number of T-cell defects have been described in ageing, including a decrease in naive T-cells, loss of certain subtypes of T-cells,^[6,7] and a decreased ability of T-cells to respond appropriately to infection.^[8] The poorly regulated B-cells secrete antibodies inappropriately, CD8⁺ T-cells cause destruction, and phagocytes such as macrophages cause tissue damage. There is also abnormal function of other cells in the immune system, such as natural killer cells.

Ageing individuals express higher levels of classical markers of immune activation like C-reactive protein (CRP) and IL-6.^[9] These markers correlate well with a number of conditions seen with increased frequency, including a predisposition to cancer,^[10] impaired response to infections and to vaccination, increased risk of autoimmune phenomena, and increased risk of cardiovascular disease^[11] and to downstream end-organ failure. The ability of tissue to regenerate is also impaired so that wound healing proceeds more slowly. Finally, there is an increased risk of degenerative diseases including dementia and mental illness.^[3]

The new epidemic

For many immunologists, the similarities between the abnormalities of the ageing immune system and those seen in HIV infection are striking (Table 1). This may help to explain why certain conditions more commonly affect elderly patients and HIV-positive patients (like B-cell non-Hodgkin lymphoma).^[12,13] It is currently largely unknown how age will affect immune function in HIV-positive patients in the South African setting. The inflammation and immune dysfunction seen even in well-controlled HIV infection may exacerbate the inflammation seen with ageing. This will have downstream effects on the magnitude of end-organ damage and failure. An increase in

Table 1: Parallels in immunological function and testing in HIV and elderly patients

	HIV-positive patients	Elderly patients
CD4 ⁺ T-cell count	Reduced; abnormal T-cell subsets	Reduced; abnormal T-cell subsets
B-cell function	Inappropriate antibody secretion, risk of B-cell malignancies	Inappropriate antibody secretion, risk of B-cell malignancies
NK cell function	Abnormal	Abnormal
C-reactive protein levels	Increased	Increased
Clotting parameters	Evidence of abnormal clotting	Evidence of abnormal clotting
Cytokine levels	Increased levels of IL1, IL6	Increased levels of IL1, IL6

conditions like cardiovascular diseases (stroke, heart attacks and peripheral vascular disease), renal failure from hypertension and diabetes, mental disease and cancer risk, seems inevitable.

Our traditional markers of disease progression may no longer be adequate to predict morbidity and mortality. Rather, this will require a truly complementary approach looking at all aspects of the patient's health. The aim would be to ensure that our patients remain fully functional for as long as possible – a shift from managing disease to promoting health. 

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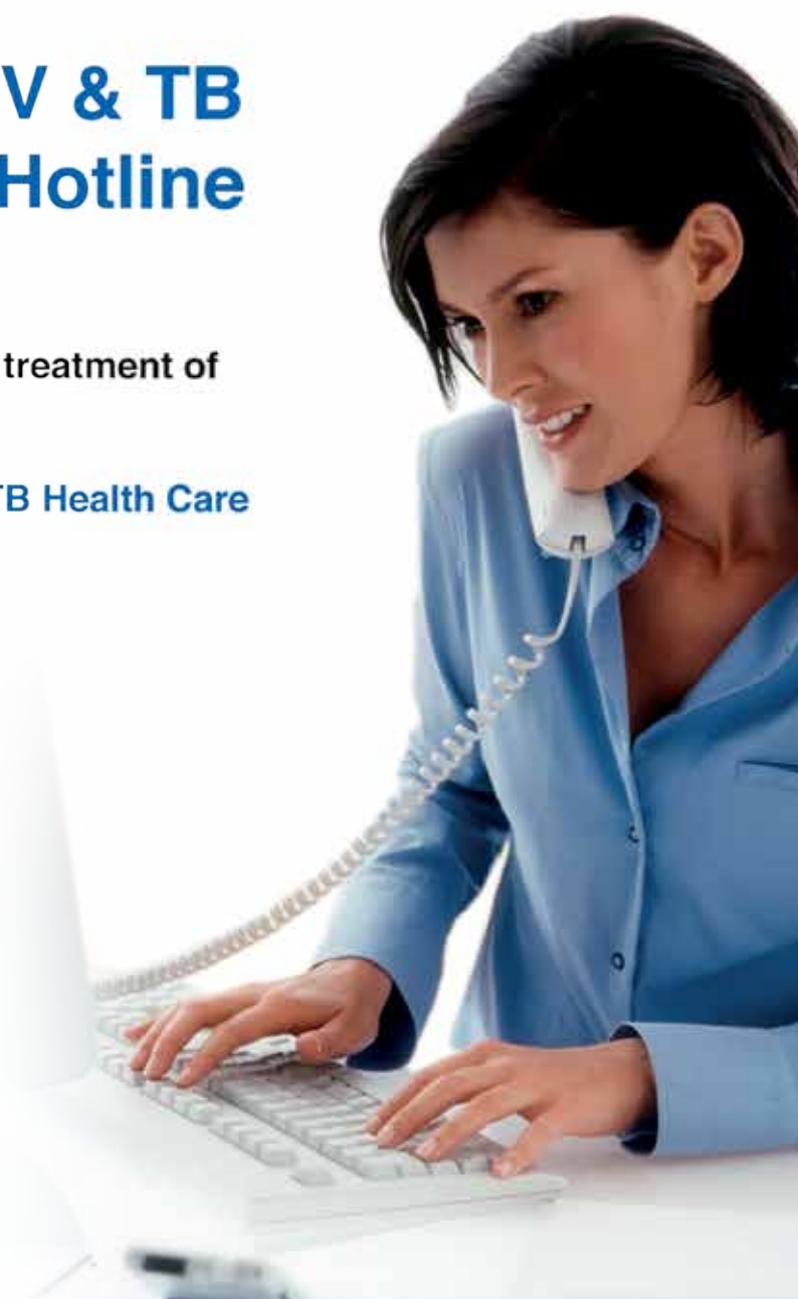
Do you need clinical assistance with the treatment of your HIV or TB patients?

Contact the TOLL-FREE National HIV & TB Health Care Worker Hotline



**0800 212 506 /
021 406 6782**

Alternatively send an SMS or
"Please Call Me" to 071 840 1572
www.hivhotline.uct.ac.za



The Medicines Information Centre (MIC) situated within the Division of Clinical Pharmacology, Department of Medicine at the University of Cape Town is the largest and only clinically-based medicine information centre in South Africa.

In collaboration with the Foundation for Professional Development and USAID/PEPFAR, the MIC provides a toll-free national HIV & TB hotline to all health care workers in South Africa for patient treatment related enquiries.

What questions can you ask?

The toll-free national HIV & TB health care worker hotline provides information on queries relating to:

- HIV testing
- Post exposure prophylaxis: health care workers and sexual assault victims
- Management of HIV in pregnancy, and prevention of mother-to-child transmission
- Antiretroviral Therapy
 - When to initiate
 - Treatment selection
 - Recommendations for laboratory and clinical monitoring
 - How to interpret and respond to laboratory results
 - Management of adverse events
- Drug interactions
- Treatment and prophylaxis of opportunistic infections

- Drug availability
- Adherence support
- Management of tuberculosis and its problems

When is this free service available?

The hotline operates from Mondays to Fridays 8.30am – 4.30pm.

Who answers the questions?

The centre is staffed by specially-trained drug information pharmacists who share 50 years of drug information experience between them. They have direct access to:

- The latest information databases and reference sources
- The clinical expertise of consultants at the University of Cape Town's Faculty of Health Sciences, Groote Schuur Hospital and the Red Cross War Memorial Children's Hospital



**MEDICINES
INFORMATION
CENTRE**



Multi-morbidities and ageing among people living with HIV in South Africa

Stacie C Stender, MSN, MSc
Jhpiego



Life expectancy at birth has increased from 50 for men and 54 for women in 2004 to 59 for men and 63 for women in 2014.^[1] This is a success story from a public health perspective, and treatment for HIV contributes substantially to this 9-year increase for both sexes. People living with HIV (PLHIV) are living longer, healthier lives due to increased access to ART. This is a major accomplishment;

however, it gives evidence that nurse clinicians need to be prepared to care competently for an ever-ageing population. HIV prevalence among the youth continues to decline due to successful treatment and prevention interventions. It is estimated that in 10 years time the HIV prevalence among PLHIV over the age of 50 will surpass that of men and women between the

ages of 15 and 49 years, and the number of PLHIV over the age of 50 will increase by 50%.^[2]

Older people have an increased risk for TB disease due to diabetes mellitus and other co-morbidities, poverty, decreased access to health services, and the gradual deterioration of the immune system as an effect of

ageing.^[3,4] TB is the leading cause of death in adults aged 50 - 64 years and the eighth-leading cause of death in adults over 65 years of age in South Africa.^[5] TB treatment in older individuals is complicated by treatment for multiple conditions (multi-morbidity) contributing to increased side-effects and drug interactions, leading to treatment default.^[6] There is evidence that TB treatment failure occurs 5x more frequently among adults over 65 years of age.^[7] This may be due to decreased absorption of drugs associated with age-related physiological changes and drug intolerance due to treatments for several conditions at once.^[8]

In one study where only 2% of participants were HIV-positive, individuals 65 years of age or older were found to be less likely than those 15 - 64 years of age to have night sweats, haemoptysis or fever.^[7] This means that as a clinician caring for older people, you need to have a higher index of suspicion for TB because their symptoms may be different from those you routinely think of with regards to TB - fever, cough, weight loss and night sweats.

Prompt diagnosis and access to treatment is essential for improved patient outcomes for any individual with TB, even more so among older adults, as the risk of disease progression is magnified. The success of public health interventions is contributing to an ageing population who requires an integrated approach to care to ensure all clinical and psychosocial needs are met, particularly within the primary healthcare system. Clinical decision-making is more difficult in people with multi-morbidity, because clinical providers and patients themselves often struggle to balance benefits and risks of treatments for each individual condition.^[9] Prescribing multiple drugs at the same time (polypharmacy) is

often appropriate; however, it needs to be done with caution, taking into consideration the potential drug interactions, timing of doses for each medication, cognitive status of the patient and his/her ability to understand, as well as patient literacy for each condition and its treatment.^[10]

Nurses working in primary healthcare are primary care providers and fundamental to the health of the population. Treatment for some chronic conditions such as diabetes or hypertension is often initially prescribed by doctors, but it is the nurse who provides the care and support over the course of the illness, as is the case with TB and HIV. Familiarise yourself with the standard treatment guidelines for the most common conditions that may be affecting your HIV patient's clinical and/or psychosocial status to ensure that quality, patient-centred care is afforded at each clinical visit. 

Clinical decision-making is more difficult in people with multi-morbidity, because clinical providers and patients themselves often struggle to balance benefits and risks of treatments for each individual condition.

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A woman with a warm, gentle expression is looking down at a tablet computer she is holding. She is wearing a black headwrap with orange decorative patterns and glasses. She is dressed in a bright orange cardigan. The background is softly blurred, showing what appears to be a window with natural light. In the foreground, a white mug and a green bottle are partially visible on a table.

**“Being HIV-
positive doesn’t
stop me from
feeling positive
about myself,
my health and
my life.”**

Michelle Robinson, BSc (Hons) Wits.

Although the doctor's role in treating HIV is critical, Anna emphasises that it is first and foremost her responsibility to manage her illness.

Anna* is a nurse with a very inspirational story to tell: how her HIV-positive diagnosis motivated her to take control of her health and start enjoying her life. A 57-year-old mother of four children, Anna is a registered nurse who worked in bedside nursing for 31 years. Full of energy and vitality, she recounts the story of how her life changed in 2007 when, post-divorce, she developed shingles, prompting her to get tested for HIV. "I knew then already that I was HIV-positive," she admits. "I just needed the test to confirm it." The positive diagnosis added to Anna's other health issues – diabetes, hypertension and asthma.

This is not an uncommon situation in South Africa, given that 9% of the HIV-positive population is over 50 years of age, which means that they have additional health needs and a higher change of concurrent chronic diseases such as cardiovascular diseases and kidney and liver diseases.

But, as this indomitable woman has shown, neither HIV, nor getting older, nor other illnesses can stop you from living life to the fullest – if you have the right attitude and a carefully managed approach to your health. Anna has advice to other people living with HIV, especially those in the nursing profession who work long hours and may be experiencing other health-related conditions.

Get to know your body, and take care of all of it

As a nurse, Anna has a lot of knowledge about how to recognise the signs and symptoms of disease. She uses this to monitor her health carefully. She doesn't just look for HIV-related issues, but is careful to care for and maintain all aspects of her health. She says that she often undergoes a "head-to-toe check-up" and is conscious that even small or minor ailments need immediate attention. She also switched jobs, becoming an employee wellness specialist, in order to allow herself a less strenuous working routine, in recognition of the fact that exertion and stress will take an additional toll on her body. Anna also highlights the fact that psychological care can make a lot of difference – from support from her partner and family to seeing a clinical psychologist. "When I have to cry, I do it properly. But then I contact the psychologist because it helps to talk to someone."

Get to know your medication and your doctor

Although the doctor's role in treating HIV is critical, Anna emphasises that it is first and foremost her own responsibility to manage her illness. She knows exactly what medications she is taking and talks to her doctors (she has eight) often and openly. She also has regular CD4 and

viral load checks to ensure that her HIV is under control. Which leads her to her next point, which is that ...

Adherence is key!

Anna cannot emphasise enough how important it is to remember to take her pills every day. "I have to take so many tablets each day. But I know that if I don't comply, I will suffer later. It is something I do for myself, not the doctor."

Disclose to people who you trust

Although Anna is careful about whom she discloses to – "People gossip and that can make things very difficult" – she says that having people in her life who know about her illness and support her is a huge relief. Her family even helps to prepare her medication and reminds her to take her tablets. While disclosing can be scary and overwhelming, she says it is a decision she does not regret.

Do things that make you happy – put your own needs first

It is clear that Anna is pursuing a fun and fulfilling lifestyle. She meditates and has regular spa treatments to pamper herself and feel refreshed. By being highly involved in church and community activities, she stays busy, which prevents her from dwelling on her illness. Last year she travelled to London, as she loves travelling. "Doing things that you enjoy is important whether you are HIV-positive, have another illness or are healthy. I am not going to sit at home and feel sad, I am living my life."

Her final piece of advice to others is this: "Put yourself first. Laugh and have fun. HIV is not a death sentence. It is a reminder that you have to make the most of your time."

*Not her real name

The process map: A tool you can use to improve clinical care

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Quality Improvement and Training Department, The Aurum Institute

Sitting around a table as a team and mapping out the way services are currently being provided can be a hugely beneficial exercise to begin to see where improvements can be made.

Introduction

In this article, we focus on the use of a simple, yet highly effective tool called a process map and illustrate how teams of primary healthcare (PHC) professionals have dramatically improved clinical care through its utilisation.

The article focuses on describing how to use a process map and then provides two examples of where it has been used within Aurum's Quality Improvement (QI) programme to come up with change ideas. These changes have been tested in PHC facilities resulting in significant improvement in antenatal HIV re-testing and HIV testing of infants 18 months after birth.

What is a process map?

A process map is a powerful tool to help you visualise the key activities and tasks in a process and how they relate to each other. The map is also known as a flow diagram or a flow chart in other circumstances. It is simply the task of putting all of the steps in a process sequentially down on a sheet of paper.^[1]

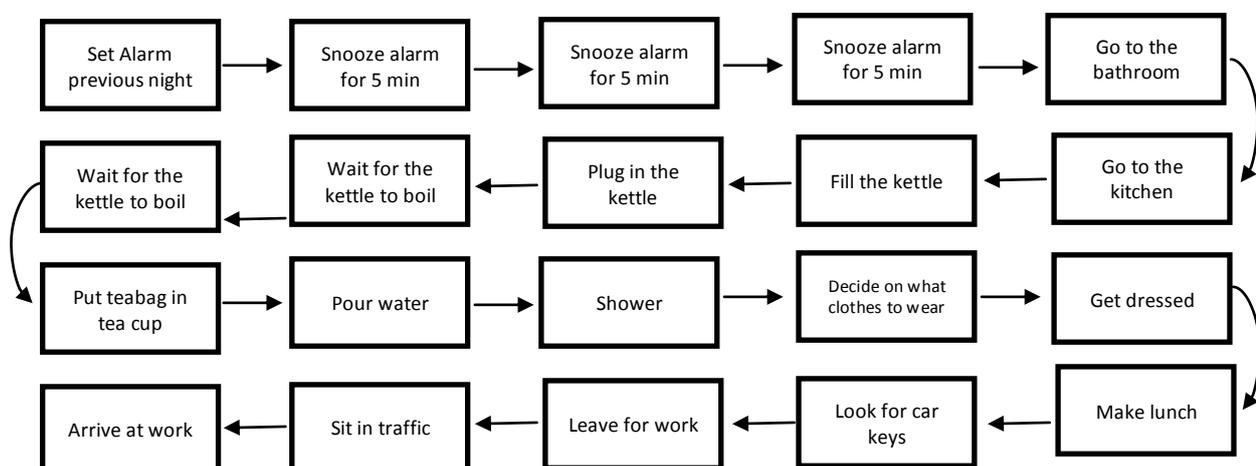
Have you ever thought about why you often get to work late in the morning? Have you really thought about each step that you take in order to get from your bed to sitting at your desk just before you start to work? If not, you are losing out on a major opportunity to improve your morning experience

and increase the likelihood of you being at work on time.

When outlining your morning routine in trying to get to work on time, you may discover that before getting up you hit the "snooze" button on your alarm clock three times. You may then groggily get up and go to the bathroom following which you may prepare some tea ... and so on, until you finally get to work.

When analysing the process map above, think about the possibilities for improvement that can be identified by mapping out this process. You may realise that 15 minutes is wasted hitting the snooze button or that instead of waiting idly for your kettle to boil, you could make sure you switch it on before you go to the bathroom or perhaps you could make your lunch the night before. These are all strategies or "change ideas" you could use to save an important chunk of time. Once you map the process and actually recognise the individual steps involved in the process, there is no

Figure 1: Process Mapping getting to work in the morning



end to the number of change ideas that can be tested to improve your morning experience and increase your likelihood of getting to work on time.

How can process mapping improve healthcare?

Walter Deming once famously said that “all work is a process” (2000).^[2] He meant that everything we do in our work lives can be understood as a series of steps that make up a broader process. These processes then overlap and interact to make the complex systems in which we find ourselves working. Often in healthcare, a patient or patients are the focus of the process map and the process they go through is called a care pathway.^[1] If we can start to map out the care pathways that occur in our clinics on an ongoing basis, then we can begin to see how things are actually being done and use process mapping analysis in order to improve. Recognising that “all work is a process” can improve care dramatically while still working within current resource constraints.

Two examples of how a process map has been used to develop change ideas

The Aurum Institute has been working with the Department of Health (DoH) using QI techniques to improve care over the last 3 years. In this time, process mapping has proved an invaluable tool in leading to change ideas for improvement. In this section, we unpack two specific examples of process improvement.

1. Antenatal Care (ANC) HIV re-testing

ANC HIV re-testing is a process that is not done reliably in all PHC facilities. In order to improve this, we undertook a process-mapping exercise and found that patients were getting their consultation (including palpation) and then being referred to the HIV counselling and testing (HCT) room for a HIV re-test if it was needed. According to the National DoH guidelines, pregnant women should be re-tested every 12 weeks during pregnancy.^[3] The problem identified in the process map was not that women were not in the facility to be re-tested. They were in fact coming for their consultation but leaving before an HIV re-test could be done. When asked to wait in an additional queue for an HIV re-test, many had legitimately decided that it was not worth their time and decided to leave.

In order to improve this process the QI team simply re-arranged the process so that women would *first be given an HIV re-test and then be sent for the consultation*. This improved performance on this indicator as women valued the palpation and were therefore prepared to wait for that part of the consultation when doing the re-test first. A further adaptation of this change is that nurses are now combining the re-test and the palpation in a single consultation session when implementing provider-initiated counselling and testing (PICT). Combining these steps has saved time for both the provider and the patient, reduced the need for additional

resources and dramatically increased the number of women being HIV re-tested.

2. Combining HIV and expanded programme immunisation (EPI) services

Another example of the application of a process map is combining standardised 18-month EPI services (Measles/Oral Polio/Diphtheria, Tetanus and Pertussis vaccines) with HIV services at 18 months. In some of the PHC facilities that Aurum supports, EPI services were being done separately to infant HIV testing at 18 months. This meant that women who had brought their children for an immunisation were seen in one room and then sent elsewhere for an HIV test if HIV-exposed. This unnecessary hand-off meant many children went without being given an HIV test. A process map was developed and analysed which revealed that a simple process change could result in a major improvement. The change idea had the nurse who takes vital signs screen children to determine their HIV status; the nurse doing immunisations would then do the HIV testing and the immunisation at the same time in the same room. This reduced the number of steps in the process and kept the patient in care, which meant the clinics stopped losing out on the opportunity to test HIV-exposed children.

Discussion and conclusion

Utilising a process map to understand exactly what we do can reveal

Figure 2: Re-ordering the ANC HIV re-testing process to improve care

Original step



Re-ordered step



Figure 3: Line graph representing the impact of the ANC re-test process improvement change idea overtime in one DoH district

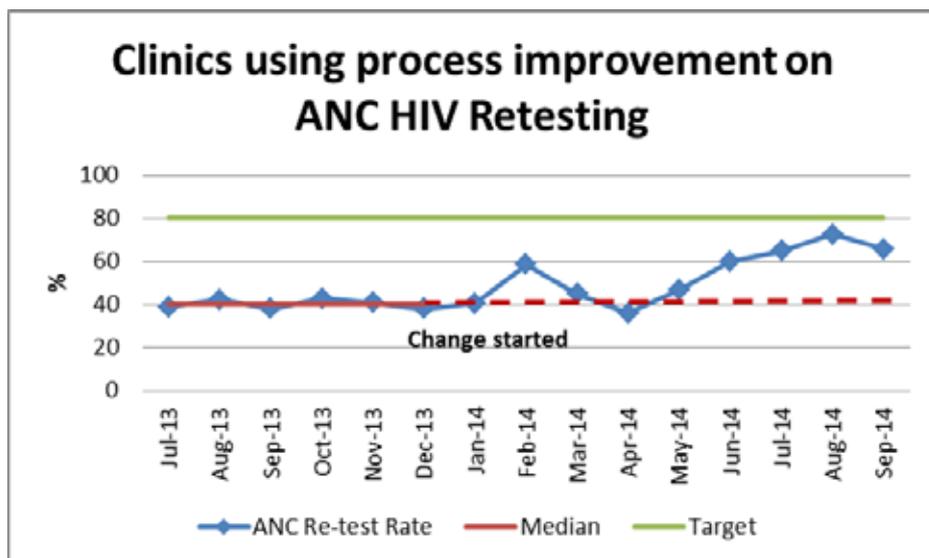


Figure 4: Process-mapping HIV testing and immunisations at 18 months

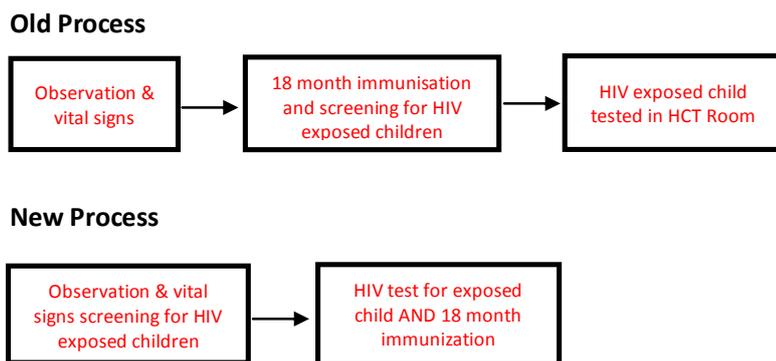
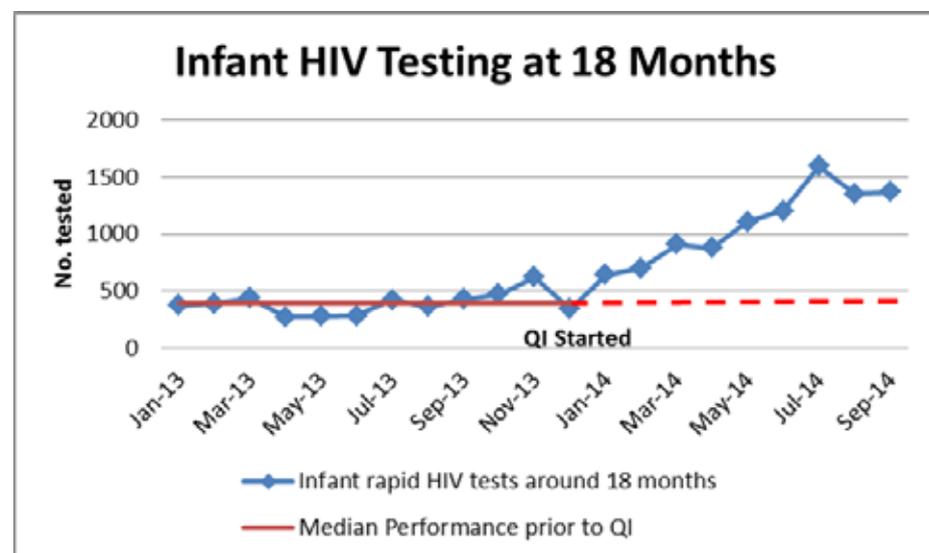


Figure 5: Infant HIV testing at 18 months in Ekurhuleni before and after process change



many possibilities for improvement in healthcare facilities. In both examples, no additional resources were required for improvement. They illustrated that a better understanding of the individual steps in a process made it possible to improve clinical care through eliminating unnecessary steps, combining steps or simply changing the order of some steps. Sitting around a table as a team and mapping out the way services are currently being provided can be a hugely beneficial exercise to begin to see where improvements can be made.

We encourage anyone who has not yet explored the power of mapping out care processes to spend some time undertaking this exercise. It will inevitably lead to process-change ideas that can be tested for improvement.

Module 3 of the Aurum Quality Improvement "HOW TO" guide on HOW TO Produce and Analyse a Process Map will provide valuable, practical information to get you and your team started on producing and analysing your own processes.^[4]

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i can change the world.

Could it really be that simple? We think so.

Out of this philosophy comes the concept of 'i can – ngingakhona': a grassroots movement where we ask you to join us in committing to making small changes in the way we approach our work in health care – not just for one day but every day.

It's simple. Just think of ONE thing you can do differently in every day practice, and then make it official by **writing it down on a pledge leaf. Take a 'selfie', post it on Facebook and put the pledge leaf on the pledge tree in your facility or department.**

Your pledge is your personal commitment to making things better!

Whether you pledge to smile more no matter how long and tiring your day has been, or pledge to complete all records accurately and promptly; all that matters is that you **PLEDGE, SHARE, DO and INSPIRE!**

Make your pledge and tell the world:



Make your pledge on facebook



tweet your pledge #icanpledge or simply scan the QR code >



i can
ngingakhona



THE AURUM
INSTITUTE

Activism, healthcare professionals and the lessons learned from HIV

Sasha Stevenson, BA (LLB), LLM; *Section 27*



On 1 December we celebrated World AIDS Day. It is a day to consider the huge gains made in the treatment of, and education around HIV in South Africa, and to think deeply about the roles that nurses, doctors, activists, scientists, politicians and ordinary people have played in the struggle for access to treatment and in healthcare struggles that continue today.

Perhaps more important than thinking about the diverse roles of these different components of the health system is to think about how the role players can work together to achieve common goals, in particular through good people standing up for what is right. Nowhere is this principle more evident than in the case of the struggle for ARVs in South Africa.

Overcoming governmental denialism took a clever combination of activism by patients and patient organisations, courageous healthcare professionals who were willing to defy the official stance to do what was right, and finally, litigation that clarified the obligations of the state. The struggle for ARVs serves as an inspiration and a reminder that

people with integrity working together have immense power.

Some of the heroes of the struggle for ARVs were healthcare professionals. In a wonderful recent publication by the Treatment Action Campaign (find it here: <http://www.nspreview.org>), a number of healthcare professionals write their stories about professional activism during the dark days of denialism. Dr Eric Goemaere, a pioneer of the ARV programme set up by Doctors without Borders in Khayelitsha, writes passionately about the reason for the success of the struggle "The best of science joined forces with the best of civil society, a grassroots struggle involving people fighting for their rights and dignity and ultimately for their lives." Dr Ashraf Coovadia writes "While the relationship between government and civil society is no longer adversarial, the need for strong advocacy and civil society participation in the treatment and prevention programme is no less important today than it was 10 years ago. My greatest fear is that complacency on our part will cause us to slide back into the dark old days of this pandemic."

Activist healthcare professionals are not anti-government. Healthcare professionals who recognise the value of civil society actors and work with them to improve the healthcare sectors are not traitors to their employers. The HIV struggle has demonstrated the value of healthcare professionals standing up for their patients and for their health system. It has demonstrated the value of healthcare professionals working with civil society to effect real change.

While the struggle for access to ARVs has been won, many struggles remain. Healthcare systems in many parts of the country are under strain. ARV adherence is often not measured properly and the integrity of the ARV programme is at risk. Collapsing healthcare facilities, stockouts, short staffed facilities and absent emergency medical services mean that there is still much to be done.

Now more than ever, healthcare professionals and activists need to be working together to win the fights of our time for a better healthcare system for South Africa. [®]



competition

HIV/TB Nursing

Working in the TB room as a nurse is a very challenging task because you are faced with more than TB. Most patients with TB are also co infected with HIV/AIDS, so the TB nurse has to be extremely knowledgeable about both infections. A TB nurse has to work with a high volume of patients and she/he risks becoming infected with TB her/himself.

We want to hear about your experiences working as an HIV/TB nurse. What strategies do you use to support patients through treatment for both diseases? How do you keep them motivated, ensure they come for their appointments, make sure people living in the household are investigated, etc.? We would love to publish your strategies for success in *HIV Nursing Matters*.

Submit your typed piece, not to exceed 1000 words, by 1 February 2015 and stand a chance to win a free one-year membership to the Southern African HIV Clinicians Society (the Society); and have your piece published in *HIV Nursing Matters*!

One winner will be chosen by 15 February 2015. The winner agrees to the publication of the story in the March 2015 issue of *HIV Nursing Matters* and to submit a picture to accompany the article. The judges' decision is final and no correspondence will be entered into. Please note that only typed stories will be considered.

Please submit via email to nonhlanhla@sahivsoc.org.

STOP STOCKOUTS

What is the Stop Stock Outs Project?

The Stop Stock Outs Project (SSP) is an organisation that monitors availability of essential medicines in government clinics and hospitals across South Africa. The SSP aims to assist healthcare workers in resolving stock outs and shortages of essential medicines at their facilities, enabling them to provide patients with the treatment they need.

How do you report a stock out to the SSP?



**Our hotline number is
084 855 7867**

- Send us a Please Call Me
- Send us an SMS
- Phone us or missed call us

We will then phone you back to get some more information.



**You can also email us at
report@stockouts.co.za**



What information do you need to report to the SSP?



**The name of the medicine
that is out of stock**



**The name of the clinic or
hospital where you work**

Reporting is an anonymous process and your name, if provided, will not be disclosed to anyone outside of the SSP.

HIV



QUESTIONS AND ANSWERS

QUESTIONS



QUIZ ANSWERS FROM SEPTEMBER 2014 ISSUE

1. *The Mental Health Gap Action Program*
2. *1.8% of the total health budget*
3. *Dr Ntšekhe*
4. *42%*
5. *True*
6. *4 basic questions*
7. *Alcohol use disorders identification test*
8. *Myth*
9. *True*
10. *True*

1. True or false: According to research published in 2012, patients receiving a single pill per day were significantly more likely to reach a 95% adherence threshold than patients receiving three or more pills per day?

Answer.....

2. Which tool can be used to improve quality of healthcare?

Answer.....

3. What was the estimated HIV prevalence in 2012 among women aged 50 - 54 years in South Africa?

Answer.....

4. True or false: TB is a leading cause of death among adults aged 50 - 64 years and the eighth-leading cause of death among adults aged over 65 years in South Africa?

Answer.....

5. True or false: According to UNAIDS (2013), life expectancy at birth in South Africa was estimated to have increased from 56.5 to 70 years?

Answer.....

6. Why must ARVs be initiated timely in people over the age of 50 years?

Answer.....

7. Name chronic health conditions that can be found in people living with HIV who are over the age of 50 years?

Answer.....

8. True or false: There is evidence that people over the age of 50 years living with HIV are more likely to experience other chronic conditions?

Answer.....

9. In a bid to increase life expectancy, which risk factors could contribute to the early development of co-morbidities that must be prevented?

Answer.....

10. True or false: Adherence improves life expectancy and quality of life?

Answer.....



**NATIONAL HEALTH
LABORATORY SERVICE**

RESULTS HOTLINE

0860

RESULT 737858

This line is dedicated to providing results nationally for HIV Viral Load, HIV DNA PCR and CD4 to Doctors and Medical Practitioners, improving efficiency in implementing ARV Treatment to HIV infected people. This service is currently available to members of Health Professionals Council of the South Africa and the South African Nursing Council. The hotline is available during office hours from 8am to 5pm Monday to Friday.

Register to use the RESULT HOTLINE

Follow this simple Step-by-step registration process

Dial the **HOTLINE** number **0860 RESULT (737858)**

Follow the voice prompts and select option 1 to register to use the hotline

A hotline registration form will be sent to you by fax or e-mail.

Complete the form and return it by fax or e-mail to the hotline to complete your registration process.

Once you are registered, you will be contacted with your unique number. This number is a security measure to ensure that the results are provided to an authorized user.

To use the hotline dial **0860 RESULT (737858)**

Select option 2 to access laboratory results.

- You will be asked for your HPCSA or SANC number by the operator.
- You will be asked for your Unique Number.
- Please quote the CCMT ARV request form tracking number (bar coded) and confirm that the result requested is for the correct patient.

Should the results not be available when you call, you will be provided with a query reference number which must be used when you follow up at a later date to obtain the result.

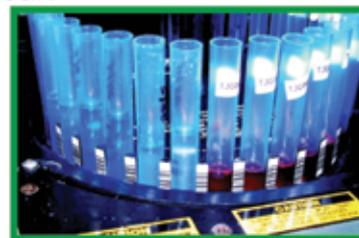
Once you have a Reference number

Select option 3 to follow up on a reference number

Should the requested results not be available, a query reference number will be provided to you.

A hotline operator will call you within 48 hours of receiving the laboratory results.

Registering for this service from the NHLS, will assist in improving efficiency, providing improved patient care and streamlining clinic processes. Call now and register to access results for HIV Viral Load, HIV DNA PCR and CD4.



NDoH/SANAC Nerve Centre Hotlines

Any HCT concerns from facility and district managers should be reported to the NDoH/SANAC

Nerve Centre Hotline and specific emails for each province:

- **Western Cape:** 012-395 9081
sanacwesterncape@gmail.com
- **Northern Cape:** 012-395 9090
sanacnortherncape@gmail.com
- **Eastern Cape:** 012-395 9079
sanaceasterncape@gmail.com
- **KZN:** 012-395 9089
sanackzn@gmail.com
- **Free State:** 012-395 9079
sanacfreestate@gmail.com
- **Mpumalanga:** 012-395 9087
sanacmpumalanga@gmail.com
- **Gauteng:** 012-395 9078
sanacgauteng@gmail.com
- **Limpopo:** 012-395 9090
sanaclimpopo@gmail.com
- **North West:** 012-395 9088
sanacnorthwest@gmail.com



AIDS Helpline 0800 012 322

The National Toll free AIDS Helpline was initiated in 1991 by the then National Department of Health's (NDoH's) "HIV/AIDS, STDs and TB Directorate". The objective of the Line is to provide a national, anonymous, confidential and accessible information, counselling and referral telephone service for those infected and affected by HIV and AIDS, in South Africa.

In 1992, LifeLine was requested by NDoH, to take over the management of the Line by rotating it between the 32 existing community-based LifeLine Centres, and manning it with volunteer counsellors. In 2000, in response to an increasing call rate, a centralised Counselling Centre was established in Braamfontein, Johannesburg, to house the AIDS Helpline.

The AIDS Helpline a national toll-free service, operates on a 24/7 basis and is utilised by people from all walks of life in urban and rural areas, in all 11 languages at no cost from a landline telephone.

Annually, the Line provides anonymous, confidential and accessible telephonic information, counselling and referrals to over 300 000 callers.

The AIDS Helpline plays a central role in providing a deeper preventive and more supportive service to those infected and affected by HIV/AIDS, but also serving as an entry point in terms of accessing services from government, private sector and other NGOs/CBOs.

Cases presented range from testing, treatment, transmission, TB, medical male circumcision, etc.

The AIDS Helpline incorporates the Treatment Line. The treatment support services were included to complement the services provided by lay counsellors on the line. The Treatment Line is manned by nurses who provide quality, accurate, and anonymous telephone information and/or education on antiretroviral, TB and STI treatment.





If you have any HIV/TB clinical questions, send your questions to “Ask the clinician” via nonhlanhla@sahivsoc.org and you will get an answer in the next issue of *HIV Nursing Matters*. If your question is urgent, please state it on your e-mail and the answer will be e-mailed back to you and still be published in the magazine.

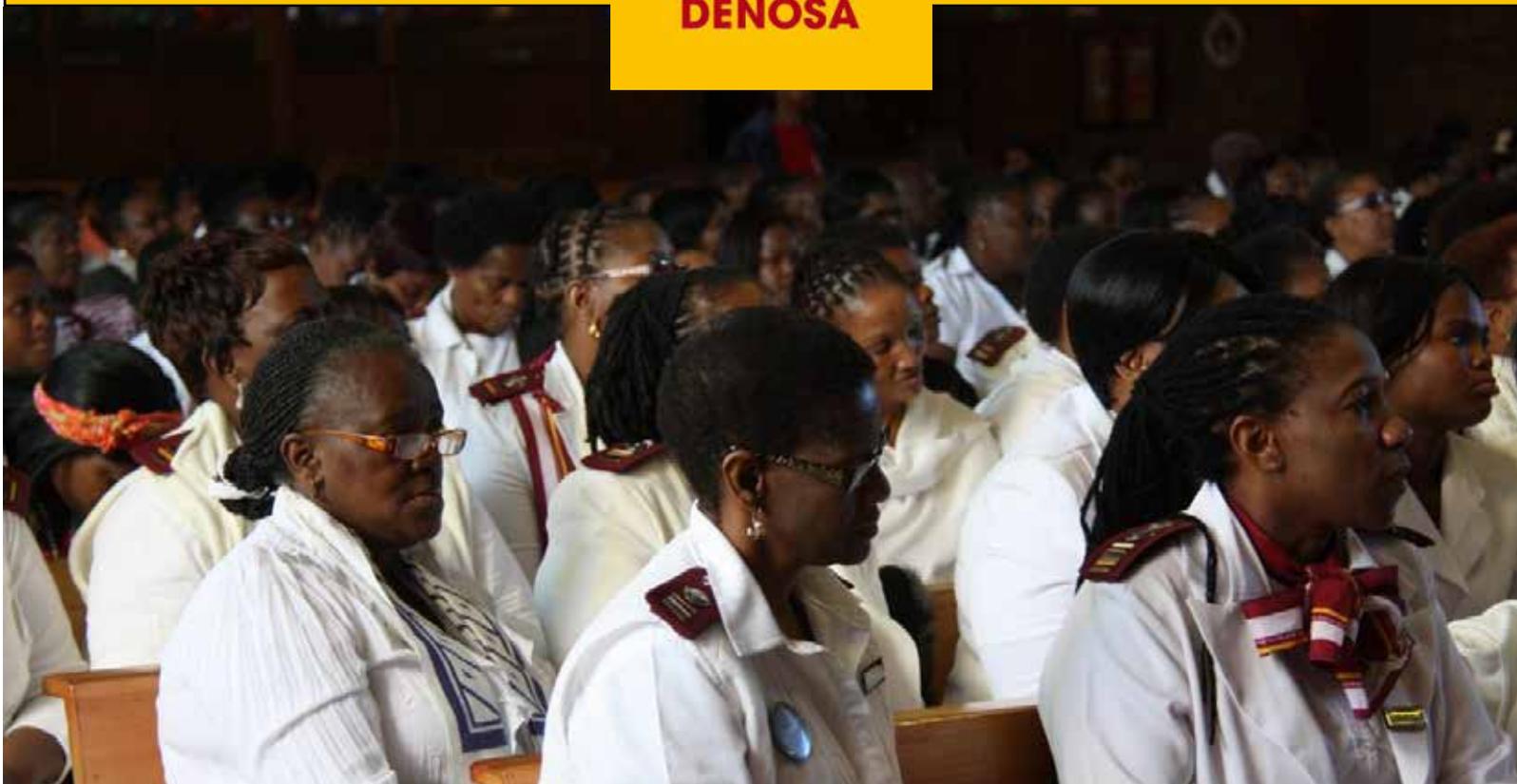
Dear clinician,

Is there a drug interaction between rifampicin and the progestin subdermal implant (Implanon)?

Dear nurse clinician

Yes, it is true. A circular published on 13 October 2014 by the Department of Health reads as follows: “Women who are infected with TB and on Rifampicin and already have the progestin subdermal implants (Implanon) inserted should be covered with another non-hormonal contraceptive method (e.g. intrauterine devices or condoms) for the duration of their TB treatment”.

Please see the whole circular in the NEWS section of this issue (page 9).



Explaining the DENOSA Indemnity Cover for nurses

What is DENOSA Indemnity Cover?

Indemnity insurance is the cover that all paid-up DENOSA members enjoy as a benefit. This comes in handy when there is litigation against our member on an incident that occurred while the member was on duty in which our member is charged and held liable for that incident.

How does it work?

When our member is found guilty at disciplinary processes or legal proceedings, the indemnity cover

pays up to R5 million on behalf of our member. This is strictly limited to professional conduct, in other words, this cover is strictly confined to incident that occurs while the member was performing her/his duty.

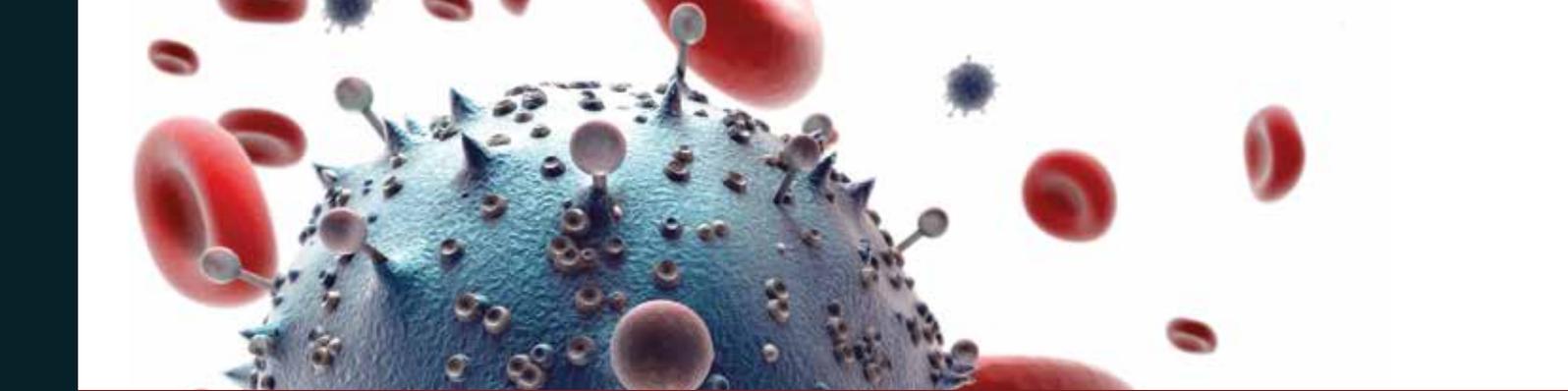
It does not apply in incidences where a member is not on duty. Furthermore, it is not extended to any colleague of family member. It is strictly for DENOSA member in situations concerning the workplace.

- Members are advised to report the incident within 24 - 48 hours of occurrence, and submit the incident report and support-

ing documents (contact details, ID number and statements) to the provincial and national offices for assessment by shop stewards.

- It is advisable to report incidents that might be regarded as minor, because they might turn out to be complex at a later stage.
- Report incidents to the provincial and national shop steward to process to the INSURER via the National Office.
- Always keep a copy for your own reference.
- All correspondence to be directed to Provincial Offices.

For more information, do not hesitate to contact Member-Service division at DENOSA on 012 343 2315



UNITING NURSES IN HIV CLINICAL EXCELLENCE, BECOME A MEMBER.



Who are we?

We are a member-based Society that promotes quality, comprehensive, evidence-based HIV health care, by:

1 LEADING • PIONEERING

We are a powerful, independent voice within Southern Africa with key representation from the most experienced and respected professionals working in the fight against HIV.

2 CONNECTING • CONVENING • ENGAGING

Through our network of HIV practitioners, we provide a platform for engagement and facilitate learning, camaraderie and clinical consensus.

3 ADVOCATING • INFLUENCING • SHAPING

With our wealth and depth of clinical expertise, we can help health care workers take their practice to a new level. We are constantly improving and expanding our knowledge, and advocating for clinical and scientific best practice.

Member Benefits

Join today and gain instant support from a credible organisation. The Society helps connect you with the best minds in HIV health care. Build your knowledge, advance your profession and make a difference by getting involved now!

- Free quarterly subscriptions to the *Southern African Journal of HIV Medicine*
- Free monthly subscription to the Society's e-newsletter, *Transcript*
- E-learning through CPD-accredited clinical case studies and on-line discussion group forums
- Free quarterly subscriptions to *HIV Nursing Matters*
- Weekly SMS clinical tips for nurse members
- Free CPD-accredited continuing education sessions
- Listing in the Society's online HIV provider referral network

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