Models for the scale up of HIV prevention, treatment and care from South Africa and beyond

South African National Department of Health
www.doh.gov.za

Collated by Michéle Youngleson
Institute for Healthcare Improvement
www.ihi.org
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of tools</td>
<td>9</td>
</tr>
<tr>
<td>Contributors</td>
<td>13</td>
</tr>
<tr>
<td>List of acronyms</td>
<td>15</td>
</tr>
<tr>
<td>Introduction</td>
<td>17</td>
</tr>
<tr>
<td><strong>Section 1: Prevention of HIV infection</strong></td>
<td>19</td>
</tr>
<tr>
<td>A million condoms a month</td>
<td>21</td>
</tr>
<tr>
<td><em>Massively increasing male condom distribution in Cape Town</em></td>
<td></td>
</tr>
<tr>
<td>Male circumcision (MC)</td>
<td>25</td>
</tr>
<tr>
<td><em>A community-level male circumcision training and service delivery model</em></td>
<td></td>
</tr>
<tr>
<td>Periods, pads and prevention</td>
<td>29</td>
</tr>
<tr>
<td><em>Reducing teenage pregnancy by addressing the needs of teenage girls at puberty</em></td>
<td></td>
</tr>
<tr>
<td>An HIV/AIDS prevention intervention for adolescents</td>
<td>33</td>
</tr>
<tr>
<td><em>Using ‘Wildfire’ equips secondary school learners to prevent HIV</em></td>
<td></td>
</tr>
<tr>
<td><strong>PMTCT: Improving access to Life-Long ART</strong></td>
<td>35</td>
</tr>
<tr>
<td>Opt-out testing for antenatal clients</td>
<td>37</td>
</tr>
<tr>
<td><em>Improving HIV testing rates and service efficiency in a busy urban ANC</em></td>
<td></td>
</tr>
<tr>
<td>A district wide campaign to reduce maternal deaths</td>
<td>41</td>
</tr>
<tr>
<td><em>Increasing access to HAART for HIV positive pregnant women will close a gap in care and reduce maternal mortality</em></td>
<td></td>
</tr>
<tr>
<td>Life Long ART for PMTCT mothers in rural primary healthcare clinics</td>
<td>45</td>
</tr>
<tr>
<td><em>ART outreach teams provide support and mentoring</em></td>
<td></td>
</tr>
<tr>
<td>‘Mothers’ Day’</td>
<td>49</td>
</tr>
<tr>
<td><em>Patient friendly access to HAART for PMTCT mothers</em></td>
<td></td>
</tr>
<tr>
<td>Integrating ART into antenatal care</td>
<td>51</td>
</tr>
<tr>
<td><em>A one-stop shop for antenatal care and ART</em></td>
<td></td>
</tr>
</tbody>
</table>
HIV testing in the labour ward
*Identifying HIV-positive women at the time of delivery improves PMTCT coverage*

A special clinic for the PMTCT mother/baby pair
*Supporting the vulnerable mother-infant pair*

Preventing orphaning
*Integrating postnatal follow up of the PMTCT mother and baby pair reduces orphaning*

**Section 2: Case finding, HIV counselling and testing**

ACTS – Advise, Consent, Test, Support
*Towards routine HIV testing – a provider-initiated HIV testing model*

The male “walk-in” clinic
*Dedicated male clinics increase testing rates*

Youth clinics
*Youth-friendly reproductive health clinics*

Finding HIV positive children
*A campaign to improve healthcare worker skills in identifying HIV-infected children in a rural sub-district*

Two outreach interventions increased HIV testing in deep rural KwaZulu-Natal
*Linking HIV testing to pension day*
*Testing inpatients for HIV*

World AIDS Day jamboree
*HIV testing and cervical cancer screening linked to a ‘one-stop shop’ for social grants*

**Section 3: Decentralising ART and decongesting large ART clinics**

Down referral of chronic stable ART patients
*Alleviating congestion at ART sites*

General practitioners share the sub-district ART load
*A private/public sector partnership to solve pressing public sector problems*
Triage: red and green clinics
Triage allows the best use of limited resources to provide targeted adherence support

Chronic care adherence clubs
Decongesting high volume ART clinics without burdening PHCs

Centralised dispensing
Outsourcing and prepackaging chronic medicines for a variety of non-communicable chronic diseases reduces the load on public health facilities

Jump-starting ART initiation in primary care
Addressing an urgent need for ART using an outreach model

Nurse-led ART initiation in primary care in an urban sub-district
Nurse led, doctor supported initiation proves successful across an entire sub-district

Single initiation visits to distant ART sites
A whole systems approach to increasing access to ART in a resource constrained rural setting

Nurse-driven ART care in rural Lesotho
Nurse initiation of ART makes ART widely accessible in rural Lesotho

Cascading ART through a rural sub-district in KwaZulu-Natal
Extending ART across a rural sub-district through stepwise development of PHCs as feeder sites to chronic ART management and initiation sites

Roving teams
Roving teams support decentralised ART services in PHC facilities across a rural district

Decentralising paediatric ART to primary care
Support from tertiary sites brings paediatric ART closer to where children live
Section 4: Measurement and management tools

Tools for setting facility targets for HIV care and ART initiation

Two simple calculators help districts set targets for each step of the HIV care pathway (HIV testing, CD4 testing, ART referral and initiation)

The impact of the change of CD4 threshold on the demand for ART

Monitoring and evaluating the ART programme
Knowing how you are doing keeps the ART programme on track

An antenatal PMTCT data tool
Closing the gaps in antenatal PMTCT to get eligible pregnant women on to Life Long ART

Tools for ‘wellness’ and ART care in rural Limpopo
Support groups, patient held records and monitoring registers help to retain HIV+ patients in care in rural Limpopo

- Support groups
- The health passport
- Registers and recall
- Patient files
- The file storage system
- iDART – a free electronic ART information system
A software system for managing large ART sites through pharmacy and data support

Section 5: Closing the gaps in care

The Breakthrough Series: A systems improvement model for rapidly accelerating access to ART

Frontline healthcare workers improve access to ART using large scale quality improvement methods

Reducing the loss of patients from care
Home-grown solutions from an HIV/AIDS Improvement Project in Cape Town

- Between HIV diagnosis and referral for ART
  Making sure patients receive their CD4 results
Keeping patients in wellness care

Timely referral for ART requires regular monitoring of HIV positive patients until they qualify for referral

Making sure patients arrive at the ART clinic

Reducing the loss of patients before initiation

A simple tool to identify patients lost before initiation

Unblocking a procurement bottleneck

A system-wide approach allowed a sub-district manager to solve a bottleneck at district level

The patient follow-up project

Keeping patients in ART care

Adolescent clinic

Meeting the needs of HIV positive adolescents

Improving laboratory services in rural KwaZulu-Natal

A district forum of key stakeholders helps improve CD4 turnaround times

Double trouble: HIV and TB

From complete separation of services to full clinical integration of HIV/TB care and ART

Enhanced tuberculosis adherence (ETA) programme

An adherence model from the HIV/AIDS programme improves adherence to TB treatment

Community based ART adherence support

Community based support increases adherence to ART and TB treatment

Section 6: Human Resources

Filling the human resource gap

Tapping into an underutilized pool of nurses and doctors to fill the resource gap

Special clinics for healthcare workers

Models of HIV/AIDS care for healthcare workers

S-T-R-E-T-C-H! Streamlining Tasks and Roles to Expand Treatment and Care for HIV

Training and structures for setting up nurse ART initiation and management in primary care
Integrating HIV/AIDS into general care  
*Using the WHO Integrated Management for Adolescent and Adult Illness (IMAI) tool to strengthen HIV/AIDS and general healthcare*

Task shifting – sharing the clinic workload with lay healthcare workers  
*Lay workers share the clinic workload and free nurses to nurse*

‘Expert patient trainers’ strengthen the healthcare team  
*Patients help train healthcare workers in HIV consultation*

Appendix
## List of tools

<table>
<thead>
<tr>
<th>Tool</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consent form for opt-out testing for antenatal clients</td>
<td>39</td>
</tr>
<tr>
<td>PMTCT comic to reduce orphaning</td>
<td>59</td>
</tr>
<tr>
<td>Provider initiated HIV consent and testing record</td>
<td>67–68</td>
</tr>
<tr>
<td>Red-alert counselling tool</td>
<td>96–98</td>
</tr>
<tr>
<td>Antenatal PMTCT cohort data tool</td>
<td>147</td>
</tr>
<tr>
<td>Patient follow-up sheet</td>
<td>185–186</td>
</tr>
<tr>
<td>Tried &amp; Tested template for writing up best practices</td>
<td>227–228</td>
</tr>
</tbody>
</table>
On 1 April 2010, our government, our healthcare workforce and the citizens of South Africa joined hands to “Take Responsibility” for the battle against HIV. We have committed ourselves without ambiguity to the task of uprooting this monstrous disease that continues to claim the lives of thousands of South Africans every day.

Over the past decades, we have built a public health system that reaches into the remotest areas of the country. We must now use this system to deliver on our promises of better healthcare services for all our citizens.

This document will help us to do just that. It brings together effective and reliable ideas that put patients at the centre of the system of care. These models have been developed by front line nurses and doctors at the coal face of the fight against HIV and TB across South Africa and in neighbouring countries that, like us, are facing this huge challenge with limited resources. These are not experimental notions but effective strategies designed within the healthcare system, that can work in every district in the country; in your clinics and in your communities.


The ‘tried and tested’ models described in the documents are not a complete record of innovation in the response to HIV/AIDS but reflect the range of great work that is being done on the ground. They celebrate the commitment and creativity of frontline healthcare workers, managers, partners and funders in their efforts to meet the unprecedented challenges of the HIV epidemic. We trust that through sharing these models of care we will create a sense of community and accelerate change by enabling colleagues around the country to rapidly scale up the response to the HIV epidemic.

This is an open source document. Please use the material freely, with appropriate acknowledgement, to spread these models of care to improve HIV/AIDS services for everyone in our country.

In February this year, the Minister of Health, Dr Aaron Motsoaledi issued a call for one massive unified effort against the twin epidemics of HIV and TB. We have the determination to bring about a change for the better for the millions of our citizens with these conditions and strong national strategic plans for execution of these programs. We urge you to use these transformative ideas to accelerate improvements in care across the country.

Sincerely,

Dr Y Pillay
Acting Director-General

Date: 11/5/10
Contributors

Financial and Technical support:

UNICEF, South Africa (Child Survival and Development Section) and the World Health Organisation (WHO)

South to South Partnership for Comprehensive Family Care & Treatment Program – a partnership between Stellenbosch University and the International Center for AIDS Care and Treatment Programs (ICAP), Mailman School of Public Health, Columbia University, funded by USAID

This document was compiled under the guidance and with the support of the following colleagues:

Dr Yogan Pillay, Acting Director-General, National Department of Health

Dr Peter Barron, Advisor to the National Department of Health

Assoc Professor Helen Schneider, School of Public Health and Family Medicine, University of Cape Town

This document was compiled by Dr Michèle Youngleson of the Institute for Healthcare Improvement (IHI). IHI is a US based not-for-profit organisation working in South Africa with NGOs, universities and departments of health to accelerate access to anti-retroviral therapy and to prevent mother-to-child transmission of HIV.

We would like to acknowledge the many people and organisations who generously contributed documents, time and photographs to the development of this document.

In alphabetical order according to organisation, they include:

Sr Hloli, Ngidi 20 000+

Sr Wilbroda, Ngidi 20 000+

Sarah Brown, Cell Life

Dr Desiree Michaels, ACTS South Africa

Xoliswa Lukhalo, Africa Health Placements

Farzaneh Behroozi, Boston University School of Public Health

Dr Mpuma Kamanga, BroadReach Healthcare

Dr Virginia Azevedo, Cape Town City Health

Judy Caldwell, Cape Town City Health

Dr David Daramola, Cape Town Metro District Health Services

Dr Katrin Stuve, Cape Town Metro District Health Services

Kirsty McHarry, Centre for Rural Health, University of KwaZulu-Natal (CRH)

Dr Richard Kaplan, Desmond Tutu HIV Foundation

Ellen Elmendorp (photographer)

Marriam Mangochi, Elizabeth Glazel Pediatric Aids Foundation (EGPAF)

Maureen Tshabalala, Elizabeth Glazel Pediatric Aids Foundation (EGPAF)

Mpefe Ketlhapile, Enhancing Children’s HIV Outcomes (ECHO)
### List of acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTS</td>
<td>Advise, Consent, Test, Support</td>
</tr>
<tr>
<td>AHP</td>
<td>Africa Health Placements</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>ANC</td>
<td>Antenatal Clinic</td>
</tr>
<tr>
<td>ASSA</td>
<td>Actuarial Society of South Africa</td>
</tr>
<tr>
<td>ART</td>
<td>Anti-retroviral Therapy</td>
</tr>
<tr>
<td>ARV</td>
<td>Anti-retroviral</td>
</tr>
<tr>
<td>CHC</td>
<td>Community Healthcare Clinic</td>
</tr>
<tr>
<td>CRH</td>
<td>Centre for Rural Health</td>
</tr>
<tr>
<td>DOH</td>
<td>Department of Health</td>
</tr>
<tr>
<td>DSD</td>
<td>Department of Social Development</td>
</tr>
<tr>
<td>EC</td>
<td>Eastern Cape Province</td>
</tr>
<tr>
<td>ECHO</td>
<td>Enhancing Children’s HIV Outcomes</td>
</tr>
<tr>
<td>EGPAF</td>
<td>Elizabeth Glazer Pediatric Aids Foundation</td>
</tr>
<tr>
<td>FS</td>
<td>Free State Province</td>
</tr>
<tr>
<td>HAART</td>
<td>Highly Active Anti-retroviral Therapy</td>
</tr>
<tr>
<td>HAST</td>
<td>HIV/AIDS/STI/TB</td>
</tr>
<tr>
<td>HCT</td>
<td>HIV Counselling and Testing</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HWSETA</td>
<td>Health and Welfare Sector Education and Training Authority</td>
</tr>
<tr>
<td>IHI</td>
<td>Institute for Healthcare Improvement</td>
</tr>
<tr>
<td>GP</td>
<td>Gauteng Province</td>
</tr>
<tr>
<td>IMAI</td>
<td>Integrated Management Tool for Adolescent and Adult Illness</td>
</tr>
<tr>
<td>IMCI</td>
<td>Integrated Management of Childhood Illnesses</td>
</tr>
<tr>
<td>KI</td>
<td>Kheth’Impilo</td>
</tr>
<tr>
<td>KK</td>
<td>Khut’So Kurhula</td>
</tr>
<tr>
<td>KZN</td>
<td>KwaZulu-Natal Province</td>
</tr>
<tr>
<td>LP</td>
<td>Limpopo Province</td>
</tr>
<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
</tr>
<tr>
<td>MP</td>
<td>Mpumalanga Province</td>
</tr>
<tr>
<td>MSF</td>
<td>Médecins Sans Frontières</td>
</tr>
<tr>
<td>NC</td>
<td>Northern Cape Province</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-Governmental Organisation</td>
</tr>
<tr>
<td>NSP</td>
<td>HIV&amp;AIDS and STI National Strategic Plan for South Africa 2007-2011</td>
</tr>
<tr>
<td>NW</td>
<td>North West Province</td>
</tr>
<tr>
<td>PALSAPLUS</td>
<td>Practical Approach to Lung Health and HIV/AIDS</td>
</tr>
<tr>
<td>PEPFAR</td>
<td>U.S. President’s Emergency Plan for AIDS Relief</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Healthcare Clinic</td>
</tr>
<tr>
<td>PLWHA</td>
<td>People Living with HIV and AIDS</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of Mother to Child Transmission</td>
</tr>
<tr>
<td>PBPA</td>
<td>Post Basic Pharmacy Assistant</td>
</tr>
<tr>
<td>RHRU</td>
<td>Reproductive Health and HIV Research Unit</td>
</tr>
<tr>
<td>SANAC</td>
<td>South African National AIDS Council</td>
</tr>
<tr>
<td>STI</td>
<td>Sexually Transmitted Infections</td>
</tr>
<tr>
<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>TOR</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td>UNGASS</td>
<td>United Nations General Assembly Special Session</td>
</tr>
<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
</tr>
<tr>
<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
</tr>
<tr>
<td>URC</td>
<td>University Research Company</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VCT</td>
<td>Voluntary Counselling and Testing</td>
</tr>
<tr>
<td>VL</td>
<td>Viral Load</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>WC</td>
<td>Western Cape Province</td>
</tr>
</tbody>
</table>
Introduction

This document was commissioned by the National Department of Health in response to the President of South Africa’s speech on 1 December 2009 that promised an extension and scale-up of the response to HIV on an unprecedented scale.

A small task team was convened to consider how to achieve this new vision1*. The group recognised that there is a wealth of knowledge and experience at the coalface of implementation that could be used to help others to plan and manage their scale up of HIV and ART services. The purpose of this project was to identify and document some of these invaluable lessons from the ground and make ‘tried and tested’ approaches readily available across the country.

By linking colleagues and organisations together through the collation and distribution of these models of care it is hoped that we can learn from and teach one another and avoid having to ‘reinvent the wheel’.

Creating the document

This document, which presents ‘tried and tested’ models for HIV prevention, treatment and care from around the country and from neighbouring countries, was developed over a period of three months in early 2010.

Models of care were selected to cover a wide range of challenges that districts are likely to face as they take HIV/AIDS care to scale. The ease of scalability of each model was kept in mind during the selection.

- Snowball sampling techniques were used to identify organisations that had developed successful models of care and email and telephonic contact was made with key individuals in these organisations.

- Information was obtained through the submission of documents including published articles, reports, terms of reference agreements, power point and poster presentations and through face-to-face and telephonic interviews.

- Face-to-face interviews were conducted with the Khayelitsha sub-district manager in Cape Town, Médecins Sans Frontières, Desmond Tutu Foundation and Kheth’Impilo.

- Clarifications were obtained by e-mail or telephonically.

Each model of care is presented with an underlying structure that identifies:

- the problem addressed by the model
- the aim of introducing the change or developing the model

1 The task team comprises members of the National Department of Health, experts in the field of HIV/AIDS, representatives from SANAC (South African National Aids Council), as well representatives of UN agencies such as WHO, UNAIDS, UNFPA and UNICEF.
- describes the change/model
- gives evidence of successful outcomes as a result of implementing the model
- gives details of other areas in which the model has been successfully implemented
- gives contact details

**Using the document**

A diagram of the HIV/AIDS care pathway, from prevention through to lifelong chronic ART care, is used as a basic structure for the document. This motif is repeated throughout to indicate which aspect of care is being addressed in particular sections.

The models of care are largely home grown solutions to local problems and are likely to be readily applicable throughout the country.

Each model has been described and illustrated as a complete entity to make it easy to use and copy.

Useful tools have been added alongside the relevant text which can be copied to support the spread of the model.

Contact details are provided at the end of each model should further information or support with implementation be required.

In the Appendix you will find a template for writing up your own best practices to share with your colleagues.
This section covers a number of scalable models for the prevention of HIV infection.

This section includes a model for massively increasing the distribution of male condoms that resulted in a 50% drop in the rate of sexually transmitted infections (STIs) in Khayelitsha in Cape Town, and a model for training doctors to perform male circumcision under local anaesthesia in community clinics in Swaziland.

A sub-section to strengthen the Prevention of Mother to Child Transmission of HIV programme (see page 35) includes models that increase access to Life Long ART for HIV positive women before and after delivery and models that retain PMTCT mothers in chronic ART care after delivery.

Models that provide effective reproductive health services for adolescents were difficult to find evidenced by high teen pregnancies across the country. The Youth Clinic in Khayelitsha (see Section 2), that offers youth friendly reproductive health services for youth to age 25, showed that under 18’s did not make good use of the service and half the teens who tested for HIV presented for termination of pregnancy.

The development of successful models to reduce teen pregnancies in schools, such as Periods, pads and prevention, offer hope for changing the course of the epidemic through changing early sexual behaviour.
A million condoms a month
Massively increasing male condom distribution in Cape Town

The challenge
In 2004, Cape Town’s biggest township Khayelitsha had an antenatal HIV prevalence rate of 33%.

Khayelitsha had 11% of the population of Cape Town, but 34% of the city’s sexually transmitted infections.

Condom distribution was already in place throughout the township, but the effectiveness of these efforts was in question. Although 2.7 million condoms were being distributed in Khayelitsha alone each year, the average number of condoms per year per male was 20, or less than 2 condoms per month per male.

The aim
The aim was to support safe sex practices (and thereby reduce STI and HIV infection rates) by making male condoms readily available in large quantities through a targeted condom drive. Condoms would be distributed throughout the community and not only at clinics.

The change
A new target was set according to need based on twice a week “protected” intercourse for each male older than 15 years (104 condoms per year per male), which came to an astounding 1 million condoms every month, or 12 million a year to be distributed.

The plan
The primary health clinic facility managers identified places in the community where men were likely to go to help identify where condom distribution should be focused – stations, taxi ranks, bus stations, public toilets, shebeens. Partner organisations in the community willing to help with distribution were then identified.

Senior healthcare management strongly supported the distribution drive and incorporated condom distribution targets in sub-district manager performance evaluations. The procurement of condoms was ensured and all partners feedback their performance monthly.
Quarterly feedback is given at City and Provincial Health Department data meetings and successes shared.

How it was done

When the Treatment Action Campaign in Khayelitsha found out about the project, they leapt on board and took full responsibility for distributing the condoms all over the sub-district. They identified one dedicated person to distribute the condoms. Travelling by taxi, he collected condoms from the sub-district office or clinics and took them by taxi to bus stations, taxi ranks, public toilets, and shebeens.

Problems identified

The distributor found he had to make frequent visits to ensure condoms that were delivered were actually being made available for use. For example, if a big box was left in a shebeen it was likely to be used as a stool, unopened with the condoms forgotten. A solution was to visit frequently, distribute smaller quantities and provide lots of encouragement, to ensure all sites were motivated to distribute as planned.

In early 2009, the supply of condoms was severely disrupted because the new approach spread rapidly across the whole city. The planned allocation of condoms fell well below the unpredicted increase in the numbers needed for distribution.

“The TAC has been behind the dramatic increase in condom distribution. They counted their success, not by how much they tried but by how much they accomplished.”

Dr Azevedo, Cape Town City Health Department

Condoms can be distributed in many places:
- Taxi ranks
- Stations
- Restaurants
- Hotels
- Shebeens
- GPs’ rooms
- Prisons

Condoms work as a preventative measure if they are immediately available when people need them. Distributing condoms to shebeens and other leisure areas helped reduce the incidence of sexually transmitted infections.
Results

The target of 104 condoms per male per year was not reached and saturation point was never found because there were always more possible outlets. Nonetheless, condom distribution and the number of access points increased dramatically in Khayelitsha.

The incidence of STI during the condom drive in Khayelitsha dropped by 50%.

The graph depicts the decrease in incidence of STI as condom distribution increases over time.

Through sharing best practices, the model of distributing condoms throughout the community spread throughout the city increasing condom distribution everywhere.

The graph depicts Cape Town’s contribution to the Western Cape’s high number of condoms supplied per man every year.

---

**The number of condoms distributed per man per year comparing provinces with Cape Town.**

[Graph showing condom distribution per man per year for different provinces.]
An adapted approach

In the Helderberg Basin, primary health clinics are distributing the condoms themselves rather than through an NGO partner. One clinic sister asked Metrorail for permission to place condoms in the toilets of all the stations and linked the stations to the nearest clinics. The clinics gave the stationmasters containers for dispensing condoms, which they fixed to the restroom walls. The clinics are responsible for filling the containers once a month. They also distribute to shebeens, petrol stations, local hotels and restaurants.

References:
2. HIV Prevalence in the Western Cape: Results of the 2006 HIV Antenatal Provincial and Areas Survey. Western Cape Department of Health
4. Personal communication, Dr Virginia Azevedo, sub-district manager, Khayelitsha sub-district, Cape Town City Health
5. Personal communication, Sr Diniso, Gordon’s Bay clinic, Eastern sub-district, Cape Town City Health

Contact:
Dr Virginia Azevedo, Cape Town City Health Department – virginia.azevedo@telkomsa.net
Male circumcision (MC)

A community-level male circumcision training and service delivery model

Control trials showed a 50-60% reduction in heterosexual HIV infection to circumcised men.

Scaling up adult male circumcision will directly decrease transmission from infected females to their male partners and indirectly protect negative women from infection, because fewer men will be living with HIV once circumcision targets are reached.

The challenge

Swaziland has the world’s highest HIV prevalence. The challenge is to reduce heterosexual HIV transmission through urgently and effectively scaling up male circumcision as an integrated intervention with men’s sexual and reproductive health.

Although there are only 170 doctors Swaziland, the government’s aim is to circumcise 80% of men aged 15 to 24 years by 2013.

**Doctors needed to be skilled up to safely perform male circumcision in adults (and infants) under local anaesthesia.**

The change

Operation Abraham Collaborative (OAC), a consortium of eight Israeli medical organisations (now joined by the Senegal Ministry of Health and Senegal Medical Association), was invited to pilot a training programme organised by the Jerusalem AIDS Project (JAIP), the Family Life Association of Swaziland (FLAS) and the Swazi Government Task Force on MC.

The pioneer pilot brought international surgeons and public health specialists to Swaziland to:

- train local doctors on how to perform high volume yet safe, swift, cosmetic and effective male circumcisions on adults and infants
- demonstrate that community-based clinics with an operating theater (rather than hospitals alone) can conduct high volume MC
- introduce education on MC for clients
- generate a model for improved health systems approach to MC for HIV prevention.
How it was done

A health facility (clinic) at community level, with one operating room, was identified and equipped to host and train medical teams to significantly increasing the in-take of men voluntarily seeking MC for HIV prevention.

Three delegations, each with two surgeons and one public health specialist, ran two-week long training courses in Swaziland over a period of time. 12 Swazi doctors were recruited for training. If a doctor was unable to complete training in one course, it was concluded during a subsequent session.

The community based clinic in Mbabane was provided with staff, medications, consumables and equipment sufficient for at least one year of MC services post training. An autoclave, meeting the needs of rapid re-sterilization of MC surgical kits, was donated by a funder. Specific protocols and training materials were developed.

Clients learned about the opportunity to be circumcised by word of mouth and began booking themselves for male circumcision.
The pilot training project was called “Operation AB”. Before the training, bookings for MC had been restricted by the limited capacity to do circumcisions. Once training started, administrative staff was guided to manage bookings, reconfirm appointments and to flexibly ‘call-in’ clients to ensure supply was met with enough demand on a daily basis.

The WHO recommended Clamp method for MC formed the approach taught in the courses. This technique had been used effectively on nearly 100,000 adults in Israel with excellent results. It is fast, easier to train non-specialists in and safe. Swazi doctors underwent a two-tiered training: focusing on implementing high volume MC using the Clamp method first and the Sleeve method later. All trainees supported client education pre-, during- and post-operation using a model that had been piloted by OAC and FLAS.

OAC trainers reached out to the wider medical and allied health professionals’ community in Swaziland educating them about the benefits of MC and its possible integration with men’s sexual and reproductive health.

Outcomes

Training Teams:

One permanent team (surgeon, nurses and administrative personnel) at a community-level clinic was fully trained to provide large scale, integrated MC services for men using the OAC delivery model. In addition, 10 local Swazi doctors were trained in adult male circumcision under local anesthesia and two were trained in neonatal MC. More than 200 adult males were circumcised during the three training courses. Intake in this one clinic increased from 3 to 10 operations a day, with an improved flow of clients.

The time for each complete procedure was reduced by 50% to an average of 20 minutes for every client.

Community Outreach:

More than 200 healthcare providers across Swaziland received presentations on the science, policy and practice of MC and the benefits for HIV prevention.

Operational research:

The pilot informed understanding on key operational questions relating to MC service delivery (e.g. number of men to be booked per day, clients’ education modules, hands-on training in the Clamp method, local anesthesia) and on the possible role of international training teams in MC at national and regional levels. It allowed for replication of an improved model within Swaziland and into other countries in Africa. Lessons learned resulted in improved training courses that incorporate medical simulation to enhance rapid implementation and scale up and to reduce risks of post-op adverse events and complications.
Challenges

Mass male circumcision requires local anesthetic and a surgeon which adds additional demands to overstretched facilities. Training nurses and midwives may be necessary with a view to task shifting. As an intermediate solution, highly qualified and experienced surgeons from West Africa and internationally may be invited to assist in high volume MC of adults and adolescents. Introducing routine neonatal MC will sustain the benefits of MC for generations.

Spread in South Africa

OAC has been invited to share its experiences and lessons learned with the DOH in KwaZulu-Natal and with local NGOs and hospitals. The objective of these exchanges is to inform decision makers on different models of MC services delivery and training and to facilitate rapid evidence-based scale up.

References:

Contacts:
1. Operation Abraham Collaborative, The Jerusalem AIDS Project – +972 2 679 7677, contacts@operation-ab.org
2. Family Life Association of Swaziland – +268 505 3082, info@flas.org.sz
Periods, pads and prevention

Reducing teenage pregnancy by addressing the needs of teenage girls at puberty

High teen pregnancy rates show teenagers are having unprotected sex, which also leaves them at high risk of HIV infection. The prevalence of teenage pregnancy in secondary schools remains high, showing we are still far from changing the tide of the HIV epidemic.

The problem

Many young girls are ignorant about sexual reproductive health, puberty and menstruation, yet HIV/AIDS and STI youth prevention interventions often assume that young girls know more than they do.

Focus groups revealed that most young girls miss school for a few days each month because of menstruation related problems.

- girls had no sanitary pads and used paper and cloth for protection
- toilet and ablution facilities at schools were inadequate and offered no privacy
- girls felt shame and pain
- information and support from parents and teachers was lacking

Absenteeism from school, for up to a week a month, leads to girls falling behind and dropping out of school, usually by the end of Grade 9.

Once they drop out of school, girls become even more disempowered and are unlikely to find work or be in a position to be empowered in sexual relationships (i.e. to abstain, negotiate safe sex etc).

Current HIV/AIDS prevention programmes often assume knowledge of sexual reproductive health by girls and fail to meet them at their point of greatest need and ignorance.

Many schools and their life orientation teachers do not have the training or materials to provide crucial information and support to these girls and parents often do not have the knowledge or skills to guide their children through puberty.

The aim

The aim was to keep girls in school by providing teens with appropriate knowledge about puberty, menstruation and sexual behaviour and by supporting girls to comfortably manage menstruation.
The change

The Protecting Futures Initiative aims to scale up puberty and sexual and reproductive health education and support to Grade 7 and 8 girls - a key entry point for sexual and reproductive health education and prevention of HIV/AIDS and STI transmission - and empower girls, teachers, schools and parents to envision and protect the futures of young girls.

The programme provides a meaningful context for girls to understand their bodies, know their sexual rights and take action to prevent HIV and STI infection and teenage pregnancy. The programme provides the knowledge and tools for schools and parents to support the girls to responsibly manage their sexual behaviour.

Sanitary pads are provided to girls on a regular basis and upgrades of school toilet and ablution facilities are encouraged and supported.

Ablution facilities must not only be adequate but must also provide privacy and low tech burners, made from fire in a drum, are used as incinerators for disposal of pads.

---

How it works

Skilled trainers and facilitators were brought into Chris Hani, OR Tambo, Ukhahlamba and Alfred Nzo districts in the Eastern Cape. Each education district identified possible schools for implementation. A meeting was held with School Principals to identify schools wishing to participate and permission was obtained from School Governing Bodies who wished to participate. The life orientation teachers and life sciences teachers of each school were trained in puberty education and sexual and reproductive health education and provided with teaching materials.

All Grade 7 and 8 girls were trained in puberty education and sexual and reproductive health issues as part of their life orientation periods in school time.

The training material is aligned to their Life Orientation curriculum and each girl receives a booklet on the training.
Stocks of sanitary pads were provided to trained girls on a quarterly basis. Feedback, questions and reinforcement of education of girls and teachers were provided at the same time.

The pads are currently funded by Procter and Gamble and delivered by Small Projects Foundation to each school; although research with a sample of 587 of the girls indicates that 95% now say that their parents/family will now buy them pads.

An assessment of school toilets and ablutions was completed and discussed with the school management and a model piloted and proposed for maintenance and upgrade of toilets.

A parent and girl mobilization programme was undertaken after school to:

- Educate girls and their parents together on puberty and sexual reproductive health.
- Improve parent and girl communication through a ‘Path to the Future’ workshop.
- Educate parents and girls on HIV/AIDS, STI and teenage pregnancy prevention.
- Educate parents and girls on starting a small home food garden.

This mobilisation programme took four afternoons spread over a number of weeks. Teachers, girls and parents learned how to empower girls and develop support systems to protect their futures.

Boys were not involved in these interventions but were included in the follow on HIV/AIDS intervention called Wildfire (in this Section).

Results

344 teachers were trained in 157 schools in four District Municipalities and 4,722 girls participated in the project. Workshops with girls and their parents were held in all four District Municipalities.

Six Schools had their toilets and ablutions rehabilitated as part of the pilot and schools started a maintenance programme for toilets. Schools with poor or no toilets and ablution facilities were put on a Provincial Sanitation Task Team list for future rehabilitation.
Parents, girls and teachers found the workshops to improve girls knowledge, skills and support structures very valuable and crucial information was gathered on change in girls knowledge, confidence and behavior and on how school, family and community support systems can be strengthened.

Parent attitudes changed about contraception but condoms are still not allowed at schools. Contraception is now more readily accessible through clinics and condoms are available through clinics and volunteer community workers.

**There was a decrease in absenteeism, dropout from school and teenage pregnancy.**

- School attendance of girls increased from 70% to 90-95%.
- School dropout by girls decreased by 50%.
- Teenage pregnancies decreased from 5-20 girls per school per year to 2-3 girls per school per year.

**The decrease in teen pregnancies indicates a positive change in sexual behaviour that will strengthen the prevention of HIV transmission.**

**Replication and sustainability**

For sustainability, Education Department officials in each participating District have been trained in addition to the teachers.

The methodology is documented and the partners intend to share the methodology with other Districts in the Eastern Cape and interested provinces or areas in South Africa and elsewhere in Africa.

**Future developments**

Small Projects Foundation is also looking to train local people to sew terrycloth pads, which can be washed and reused, are environmentally friendly and can be locally available (women in villages can make them themselves).

Reference:
Impumelelo Innovations Award Presentation, 5th March 2010, Cape Town.

Contact:
Dr Paul Cromhout, Small Projects Foundation – 043 743 9592, paulc@spf.org.za
An HIV/AIDS prevention intervention for adolescents

Using ‘Wildfire’ equips secondary school learners to prevent HIV

The challenge

*The high incidence of teen pregnancies and the high prevalence of HIV in young adults show early sexual behaviour is still fueling the HIV epidemic.*

The aim

The aim was to have a positive impact on the sexual choices young people make.

The change

Grade 9 is the last grade of compulsory education and a school exit point, possibly the last opportunity for some students to be exposed to preventative and management skills for HIV/AIDS. And, with sexual debut in teens being between 13.5 years and 14.9 years in the Eastern Cape¹, grade 9 may be an ideal time to target the future young adult population.

A psycho-educational HIV prevention intervention called ‘Wildfire’, that has been successfully used in adult populations and community healthcare workers throughout the Eastern Cape Province, was applied to grade 9 learners.²

How it works

*‘Wildfire’ is an experiential intervention given to groups in a workshop format.*

Role-plays are used to simulate exposure to HIV/AIDS, voluntary counselling and testing (VCT) and the personal choices and decisions associated with exposure. The programme offers comprehensive education around sexual issues and HIV to support postponement of sexual debut as well as protection through safe sex practices.

The intervention consists of a one hour-long and two further 45 minute-long sessions for questions and further discussion to allow teens to apply the lessons to their own lives.

800 Grade 9 learners, both boys and girls, from urban and rural populations, boarding, informal settlement and township schools in two districts in the Eastern

---

**Partners:**
- The Small Projects Foundation

**Location:**
- East London and Libode District, Eastern Cape Province, South Africa

**Wildfire is good for young people because it educates and encourages them, what you must do if you have HIV/AIDS, who can help you when you have and who do you tell.**

A learner participant
Cape participated in the workshops. Workshops were given by Dr Paul Cromhout of the Small Projects Foundation in Xhosa to groups of about 40 consenting learners at a time at their schools.

Results

‘Wildfire’ is user-friendly and was found to be accessible to adolescents through the schools. There was a great change in the adolescents who had been through ‘Wildfire’ when compared with teens who had not done ‘Wildfire’. The children who had done ‘Wildfire’ seemed to have internalised the knowledge and achieved confidence and a degree of mastery of the issues.

80% of adolescent participants recommend ‘Wildfire’ as a way of teaching peers about HIV/AIDS.

The effect on sexual behaviour has not yet been determined.

Spread

‘Wildfire’ could potentially be included as an option for trained personnel to administer and for the Life Orientation curriculum to use to support dealing with HIV/AIDS in adolescent populations. It is potentially affordable and accessible to the student population.

Psychological training of facilitators would be a pre-requisite.

The challenge would be to advocate the official use of ‘Wildfire’ in secondary schools country-wide and then train appropriate personnel to administer it.

References


Contact:
Julie Cromhout, Small Projects Foundation – 043 743 9592, j.cromhout@spf.org.za
PMTCT: Improving access to Life-Long ART

This sub-section looks a number of models for strengthening the Prevention of Mother to Child Transmission (PMTCT) programme to reduce maternal and infant mortality and to reduce orphaning.

The PMTCT programme can prevent:

- Maternal mortality
- Infant mortality
- HIV transmission
- Orphaning

This section highlights models of care specifically designed to improve access to Life Long ART for eligible HIV positive pregnant women before and after delivery as well as models to ensure PMTCT mothers remain in chronic ART care once the baby is born.

A salvage intervention to test women for HIV immediately after delivery is included.

Other interventions to improve each step of the PMTCT pathway can be found in the Department of Health’s document Solutions to Operational Challenges in PMTCT Implementation in South Africa: Selected Experiences and Case Studies compiled by the Medical Research Council in 2009 www.acceleratedplan.org.za (under Best Practices and tools) or www.mspsouthafrica.org.
Opt-out testing for antenatal clients

Improving HIV testing rates and service efficiency in a busy urban ANC

The problem

It is important to identify HIV-infected pregnant women to prevent mother-to-child transmission of HIV and provide life saving care to the mother. McCord Hospital wanted to increase HIV testing of ANC clients and improve clinic flow.

The change

The change was to integrate HIV testing as part of routine antenatal care and to do the HIV test during the clinical consultation.

The Opt-Out approach "normalises" HIV testing and makes it part of routine care. It fast-tracks the care process by using an integrated “one-stop shop” approach by midwives: ANC and HIV testing in one.

How it works

Opt-out testing requires PMTCT to be fully integrated in antenatal care. In opt-out testing, new antenatal clients are counselled as a group in the waiting room.

Each routine antenatal investigation and blood test, including HIV, is explained.

This normalises HIV as part of routine antenatal care. Individual clinical consultation with the midwife follows during which consent for all antenatal blood tests, including HIV, is signed on one single form. Blood is taken for all routine antenatal tests, and an extra tube is taken in case a CD4 count is required. The HIV rapid test is done using blood that has already been drawn. Results are ready by the end of clinical examination and ongoing management is decided according to the results.
Results

Because PMTCT was fully integrated into ANC waiting times for testing were eliminated and the efficiency of the clinic improved.

The ANC HIV testing rate increased significantly from 89% to 99%.

References:

Contacts:
1. Dr. Janet Giddy – jgiddy@hebron.za.net
2. Ms Tamaryn Crankshaw – tamaryn@mccord.co.za
<table>
<thead>
<tr>
<th>MCCORD HOSPITAL ANC CLINIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consent form for HIV test, WR, Rhesus and Full Blood Count</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I, _________________________ ANC# ______</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Client’s full name)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>hereby give consent for the above blood tests.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Client’s Signature</th>
<th>Printed Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Counsellor’s Signature</th>
<th>Printed Name</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Visit #: ______</th>
<th>Age: ______</th>
<th>Gestation: _____</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Marital Status: __________</th>
<th>Date: ______</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>TEST RESULTS</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Screening: ____________________ (Abbot Determine)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Confirmatory: ____________________ (Smartchek)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>____________________ (Elisa)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Test done by: __________</th>
<th>Checked by: __________</th>
</tr>
</thead>
</table>
A district wide campaign to reduce maternal deaths

Increasing access to HAART for HIV positive pregnant women will close a gap in care and reduce maternal mortality

The problem

In Ugu District in KwaZulu-Natal, the high rate of maternal death was shown to be directly related to HIV infection. This was linked to HIV positive pregnant women eligible for HAART not being reliably initiated on treatment: the referral rate for eligible pregnant women was 61.4% and the ART initiation rate only 44%.

The aim

The aim was to improve referral to and initiation on Life Long ART for eligible pregnant women to above 90% by April 2010 and reduce maternal mortality.

The change

A Campaign called ‘UGU MASIBAVIKELE (LET US PROTECT THEM) HAART CAMPAIGN’ was launched in September 2009 and is driven by the district PMTCT co-ordinator.

In preparation for the launch of the campaign, three pre-launch meetings were held to sensitize the District and facilities. All facilities across the district involved with PMTCT were part of the campaign.

Already existing district monthly prenatal meetings are used as a platform for the campaign.

All clinics and the hospital in a referral cluster have representatives at the meeting. The meetings are now structured to facilitate improvement:

- The District aim for HAART initiations is shared by everyone and facilities use this aim to set PMTCT HAART targets.

  - Facilities feedback their PMTCT data each month to assess how they are doing
  - Data is used to drive improvement
    - A HAART ‘dashboard of indicators’ is used to sensitize facilities on critical data elements and measures to analyse (see page 43)
    - Each facility tracks its own performance using the dashboard and a run chart

Partners:
KwaZulu-Natal Provincial Department of Health
20 000+
Location:
Ugu District, KwaZulu-Natal
Funders:
DFID
UNICEF
Flow diagrams (see page 44) are used to map out each step in the patient’s care path so the system from diagnosis, through assessment for HAART and referral to initiation onto HAART is understood and shared.

Places where patients are delayed or lost before referral or initiation are identified.

Brainstorming is used to find possible solutions to closing the gaps and solutions that work are borrowed and shared (see page 44).

Small cycles of change are used to test out whether the new ideas will work in practice.

Best practice is shared between all facilities to speed up the pace of improvement.

Each facility forms its own improvement team to do the work between monthly meetings.

**Results**

The percentage of PMTCT mothers with low CD4 counts being referred for HAART has increased significantly in the 4 months since the launch of the intervention from the six months before.

![Graph of PMTCT mothers referred for HAART](image)

*The graph shows the increase in the percentage of eligible PMTCT mothers referred for HAART in the first four months of the campaign.*
Factors for success

- There is sustained leadership support, regular data review and a shared sense of the system
- The District is high functioning and committed to improvement
- The District is the driving force of the campaign and has a good relationship with partners
- The campaign is championed by the District PMTCT coordinator supported by the MCWH coordinator
- The District Information Officer (DIO) fully supports the campaign and facilitates the use of district data to show performance. The DIO is now able to make graphs for the facilities
- PHC Coordinators / PHC Supervisors are leaders of the change efforts
- The clinic staff are fully engaged and willing to work with PHC coordinators
- Due to involvement of the District leaders, the changes that are discussed are scaled up and implemented immediately

The HAART campaign dashboard helps facilities keep track of how they are doing over time and helps identify gaps in care.
### Some change ideas for increasing access to HAART in PMTCT

#### These change ideas were in the Change Package of the National DOH's “Accelerated Plan for PMTCT”

<table>
<thead>
<tr>
<th>CHANGE IDEAS</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform as many HAART preparation steps at PHC level as possible then coordinate fast track ARV initiation at ART site</td>
<td>Requires co-ordination between PHC and ART facilities. Referrals should not be delayed to complete preparation. Preparation should not be repeated at ART site if already done.</td>
</tr>
<tr>
<td>Use checklist with completed tasks and pertinent lab results to improve quality of patient referral from ANC to ART sites</td>
<td>Requires training and using a new referral checklist</td>
</tr>
<tr>
<td>Use one or more of the following to improve reliability of patient referral from ANC to ARV site:</td>
<td>Clinics must choose an option based on their local circumstance</td>
</tr>
<tr>
<td>- walk patient to ARV clinic (in facility)</td>
<td></td>
</tr>
<tr>
<td>- phone ahead</td>
<td></td>
</tr>
<tr>
<td>- give appointment card</td>
<td></td>
</tr>
<tr>
<td>- send sms reminder to client</td>
<td></td>
</tr>
<tr>
<td>Start HAART without treatment buddy if you feel confident in the patient’s ability to adhere</td>
<td>Already part of the policy but may have a large impact in places that are strictly following DoH guidelines. “Mothers’ Day” or mothers2mothers can provide necessary social support</td>
</tr>
</tbody>
</table>

#### These change ideas have been generated in the peri-natal meetings by facilities themselves

<table>
<thead>
<tr>
<th>CHANGE IDEAS</th>
<th>COMMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate pregnant and non-pregnant women’s CD4 counts results, to be able to follow up /fast track pregnant women</td>
<td>Not expected to have large quantities of results filed as the results should have been disclosed as soon as possible once received from lab</td>
</tr>
<tr>
<td>RN to handle and disclose results of CD4 count</td>
<td>Lay counsellors should assist the registered nurse, but are not required to handle and disclose CD4 results</td>
</tr>
<tr>
<td>Make follow up with the lab by phoning them, or sending a list for the clients you are expecting results for</td>
<td>Some specimen may not have reached lab, or was not processed due to other problems, therefore require to be repeated</td>
</tr>
<tr>
<td>Modular classes one and two to be summarized in one day since it deals with stigma and disclosure after post test counselling- modular class 3 can be done when disclosing results for CD4</td>
<td>Clients need to be assessed whether they can handle information, but ideally readiness classes (counselling sessions 1 and 2) are relevant to all tested HIV positive clients, except counselling session 3 which is relevant to clients with low CD4 / WHO STAGE 4</td>
</tr>
<tr>
<td>Within two weeks women should have been referred to ARV site and initiated</td>
<td>This is according to the policy to fast track women onto HAART</td>
</tr>
<tr>
<td>Linked to CHW (Community health workers) for follow up, CHW can be used to trace mothers with low CD4 as well, or phone clients</td>
<td>For those that have not received their results, to be linked with Community Health Workers. Clinics need not wait for the next visit of clients if results are low, and have received results from lab</td>
</tr>
</tbody>
</table>

Reference:  
Personal communication Hloli Ngidi 20 000+  

Contact:  
Hloli Ngidi, 20 000+ – Ngidiw@uKwaZulu-Natal.ac.za
Life Long ART for PMTCT mothers in rural primary healthcare clinics

ART outreach teams provide support and mentoring

The problem

Uthungulu district experienced major challenges with initiation of Life Long ART for PMTCT clients due to human resource constraints and lack of integration of services. There were problems with identifying eligible clients and long waiting lists for initiation.

The change

Uthungulu District developed a plan to initiate Life Long ART for all eligible PMTCT clients at rural PHC facilities. Four ART outreach teams would provide support across the district.

*The plan involved geographic clustering of ART outreach teams to cover all PHC facilities in the entire district.*

How it works

The ART outreach team comprises vital staff necessary to support the ART program within the cluster of PHC facilities. While the composition of each team is different, based on the specific needs of each cluster, most teams comprise a doctor, two professional nurses, a pharmacy assistant, a nutrition assistant, a lay counsellor and a data capturer. Each ART outreach team is based within a particular cluster of PHC facilities, and provides HIV care and treatment services at these facilities every day of the week. All eligible clients, including pregnant women on the PMTCT programme, are provided with ART readiness counselling and initiated on Life Long ART. The district leads this initiative, which is supported fully by the three referral hospitals in the district.

Resourcing

An implementing partner, Health Care Improvement Project / University Research Co.,LLC (HCI/URC) supported the provision of all required resources including staffing, equipment and furniture. The district provided transport.
Monitoring and evaluation

Data from each PHC cluster that is initiating Life Long ART is captured onsite at the PHC facility. Weekly meetings are held by the ART outreach team members to discuss issues of interest and specific challenges. Onsite training and mentoring is also conducted where PHC staff is capacitated to analyse and interpret data from their facilities.

Monthly meetings are held with the district management, the PHC manager, representatives from all the referral hospitals and all ART outreach team members to provide feedback, discuss issues of integration and address challenges as a team (see Improving Laboratory Services in Rural KZN in Section 5).

Results

**Peri-natal HIV transmission rates dropped from 23% to 4.5% in 2009.**

Since the ART outreach teams started working within the PHC clusters, there have been improvements in many areas:

- Good integration of services at all levels (community, PHC, hospital)
- Improvement in HIV testing rates in pregnancy with over 97% of all pregnant women testing for HIV since July 2009
- Increase in the number of pregnant women initiated on Life Long ART per quarter which doubled from 524 in 2007 to 1104 in 2009 (see graph below).
- Compliance with National PMTCT and ART guidelines
Spread

The success of this initiative has resulted in very strong leadership support from the district and KZN province has adopted this as a strategy for rolling out HAART services to PHC sites in all districts.

References:
1. Dr. Donna Jacobs, Health Care Improvement Project / University Research Co., LLC (HCI/URC), personal communication
2. Integration of HAART in PMTCT programs at PHC level, Uthungulu District, KwaZulu-Natal Department of Health Summit, Alpine Health Resort, Drakensburg October, 2009

Contacts:
1. Dr Donna Jacobs – 072 377 6298, 012 342 1419, donnaj@urc-sa.com
2. Dr Tumi Moutloatse – 079 885 6289, 012 342 1419, tumimo@urc-sa.com
3. Mrs. Tina Maartens – 082 377 4267, tinam@urc-sa.com
‘Mothers’ Day’

Patient friendly access to HAART for PMTCT mothers

Mothers with low CD4 counts are at HIGH RISK of transmitting HIV to their unborn infants if they do not access Life Long ART before delivery.

The challenge

In 2007 Eastern sub-district had the highest mother to child transmission rate in Cape Town (7.5% compared with < 5% for the whole city). The antenatal clinic in a busy Community Healthcare Clinic (CHC) with the biggest antenatal clinic in the sub-district and the highest antenatal HIV prevalence rate wanted to support access to Life Long ART for eligible PMTCT mothers. They were concerned that these mothers defined a vulnerable group and wanted to ensure they were well supported.

This patient-friendly change made it easier for mothers to access Life Long ART.

The change

‘Mothers’ Day’ is a day at the ART clinic dedicated to PMTCT mothers needing Life Long ART.

‘Mothers’ Day’ is held on the same day as the paediatric ART clinic for children and their caregivers at the CHC’s in-facility ART clinic. This dedicated day allows mothers to spontaneously form a support group with other pregnant women and to witness HIV positive babies and children receiving care. This gives them confidence that both mother and infant will be well looked after if the infant tests HIV positive.

PMTCT mothers continue to receive chronic ART care on ‘Mothers’ Day’ after delivery until the baby’s PCR results is known. If the baby is HIV positive, mother and baby remain on the same day at the paediatric clinic, if negative, the mother moves to the regular adult HAART day to continue her chronic care.

In addition, mothers are provided with mentors during their visits through the mothers2mothers (M2M) programme.

M2M is an organisation that supports PMTCT mothers through antenatal care and delivery using mentor mothers who themselves have been through the PMTCT programme. M2M was introduced to women on ‘Mothers’ Day’ and further enhances access to HAART for pregnant women.

---

Partners:
- Cape Town City Health
- Institute for Healthcare Improvement
- Eastern Cape Provincial Department of Health
- Broadreach Healthcare

Location:
- Eastern sub-district, Cape Town, Western Cape
- Senqu sub-district, Ukhahlamba District, Eastern Cape

Funders:
- DFID
- US President’s Emergency Plan for AIDS Relief (PEPFAR) in the Eastern Cape
Results

‘Mothers’ Day’ has increased the number of HIV positive pregnant women accessing Life Long ART before delivery.

 através do National Department of Health’s Accelerated Plan for PMTCT, an ART clinic at Empilisweni Hospital in a rural sub-district in the Eastern Cape started a ‘Mothers’ Day’ for pregnant women needing ART initiation in November 2009. Attendance has grown weekly and mothers are enjoying the change. The MCWH and HIV programme managers take turns in supporting group discussion using a checklist of topics compiled by the improvement team.

References:
2. Carolyn Baek et al Key Findings from an Evaluation of the mothers2mothers Program in KwaZulu-Natal, South Africa, Horizons programme, Health Systems Trust
3. Dr Michèle Youngleson, Farzaneh Behroozi, Senqu Accelerated-Plan for PMTCT Case Studies November 2009

Contacts:
1. Dr Michèle Youngleson, Institute for Healthcare Improvement – 082 828 8332
2. mothers2mothers – 021 466 9160 www.m2m.org
Integrating ART into antenatal care

A one-stop shop for antenatal care and ART

The problem

HIV positive pregnant women with low CD4 counts are at high risk of peri-natal HIV transmission unless they access HAART before delivery. Multiple visits to different clinics for antenatal care and ART during pregnancy act as a barrier to care.

The change

Integrating ART services into routine antenatal care at McCord Hospital in Durban enabled eligible HIV positive women to be initiated on ART within one week of HIV diagnosis.

**ART services were started at the antenatal clinic (ANC), providing comprehensive care in one location.**

The outcomes

100% of eligible HIV positive women who attend the hospital’s ANC now access Life Long ART before delivery.

The one-stop shop for ANC and HAART saved time for patients and the health service, reduced the loss to follow up during pregnancy, increased the proportion of eligible HIV positive women accessing HAART before delivery and consequently reduced peri-natal HIV infection as well as maternal morbidity and mortality.

Postnatal gap in care

*Linking mothers who initiate Life Long ART at the ANC into routine chronic ART care after the six week post-delivery period was identified as a gap in care.*

This early postnatal drop out amongst women initiated during pregnancy was also observed in Khayelitsha with only 73% of women referred to the ART clinic registering at the ART clinic after delivery even though the ART clinic is in the same facility as the ANC.

*A special follow up clinic for the PMTCT mother/baby pair offers a solution to retaining PMTCT mothers on Life Long ART in care after delivery (see page 55).*
References:
1. Dr Janet Giddy, personal communication
   Médecins Sans Frontières, Western Cape Province Department of Health, City of Cape Town
   Department of Health, University of Cape Town, Centre for Infectious Diseases Epidemiology and
   Research.

Contacts:
1. Dr Janet Giddy – jgiddy@hebron.za.net
2. Ms Tamaryn Crankshaw – tamaryn@mccord.co.za
HIV testing in the labour ward

Identifying HIV-positive women at the time of delivery improves PMTCT coverage

The problem

Some women do not test for HIV during the antenatal period and even those who test negative may become infected with HIV after their last test and before delivery.

The change

Testing or re-testing women in the labour ward provides one more opportunity to identify HIV exposed babies and prevent peri-natal mother to child transmission of HIV.

Rahima Moosa Mother and Child Hospital (RMMCH) invited women in the labour and postnatal wards who had had live births to test or re-test for HIV irrespective of their HIV status or their potential refusal to test. Rapid HIV antibody tests were offered to women who had

- no HIV result
- reported an HIV-negative result performed more than six weeks prior to delivery
- reported an HIV result different from the documented result.
The outcome

A large number of additional HIV-positive women were identified through peri-partum HIV counselling and testing, allowing more infants to access prevention.

71.3% of the 5169 women delivering were interviewed and 46.8% enrolled in the study. Of these, 88.5% reported a known HIV status and 22.9% (490) of these were known to be HIV-positive. After counselling and testing, an additional 101 HIV-positive women were identified.

Peri-partum HIV testing increased the number of HIV+ women by 20% but infant follow-up rates were disappointing especially in the newly diagnosed group.

Of the infants expected to have PCR testing, 76.4% of the antenatally diagnosed versus 14.5% of the newly diagnosed women returned with their infants.

Additional counselling support for newly diagnosed HIV-positive women may enhance their chances of returning for infant diagnosis and ongoing maternal care.

The pie chart shows the relatively large proportion of HIV exposed infants found through HIV testing and retesting in the labour ward.

Effect On Actual PMTCT Coverage for Infants

- Known HIV-exposed infants pre-intervention
- Additional HIV-exposed infants identified by testing at time around delivery
- Expected HIV-exposed infants missed due to maternal test refusal
- HIV-unexposed infants

Reference:

Contacts:
1. Dr. Karl Technau, Principal Medical Officer, Empilweni Clinic, Dept. of Paediatrics, Rahima Moosa Mother and Child Hospital – 011 470 9421, karltechnau@absamail.co.za
2. Ellen Elmendorp, photographer – ellen@mweb.co.za
A special clinic for the PMTCT mother/baby pair

Supporting the vulnerable mother-infant pair

The problem

McCord Hospital in Durban had excellent HIV transmission outcomes (< 3%, as measured by infant PCR at six weeks) but noted that linking PMTCT mothers on Life Long ART into routine chronic ART care after the six week post-delivery visit was a problem. Moving this vulnerable, post partum group of women from the ANC where they had initiated Life Long ART, to the Adult ART clinic was similar to referring them to a “new” service provider even though the clinic was in the same hospital.

Retention in care after delivery was < 50%.

The change

The “Mamanengane” Post Natal Clinic was started to provide follow up care for PMTCT mothers and infants for 18 months post delivery.

The post-natal clinic for PMTCT mothers and their babies is in the same venue as the antenatal clinic, staffed by the same counsellors and clinicians, but held on a different day of the week.

Patients ‘graduate’ to the general ART clinic after 18 months in the special postnatal clinic.

The results

Uptake of care exceeded expectations. Many more patients are now retained in care, with an increasing number graduating at the end of 18 months with their babies, both healthy.

Services provided to the mother/child pair

BABY
- HIV testing for infants at 6 weeks, 14 weeks and 18 months
- Health Promotion Services: growth monitoring & nutritional advice, immunization, cotrimoxazole prophylaxis
- Primary healthcare for infants

MOTHER
- Postnatal monitoring and care of mothers
- General and HIV related clinical support services (including ART)
- Psychosocial support
The pie charts show the retention in care after delivery of groups of mothers and children. They graduate from the special post-natal clinic to routine ART services after 18 months.

Reference:
Dr Janet Giddy, McCord Hospital Durban KwaZulu-Natal, personal communication

Contacts:
1. Dr Janet Giddy – jgiddy@hebron.za.net
2. Ms Tamaryn Crankshaw – tamaryn@mccord.co.za

Mothers and babies can be followed up at the same clinic visit to ensure best outcomes for both of them. (Photo: mothers2mothers)
Preventing orphaning

Integrating postnatal follow up of the PMTCT mother and baby pair reduces orphaning

PMTCT mothers are often overlooked because postpartum care typically focuses on the baby.

The problem

PMTCT mothers are, by definition, at risk of dying from HIV and their babies are at risk of being orphaned. However, PMTCT mothers are often overlooked after delivery even though they frequently attend the primary care clinic with their infants. To ensure the survival of PMTCT mothers who were not eligible for ART before delivery, it is critical to provide proper HIV follow up after delivery to identify when ART is needed and ensure timely referral and initiation on ART. This is also crucial to reduce HIV infection in breast fed babies.

The aim

The aim was to ensure that mothers who are known to be HIV positive (on the PMTCT programme) are properly followed up in the months after delivery.

The change

A patient friendly change was made to take advantage of the mother’s visits to the clinic with the baby by repeating her CD4 count during the baby’s clinical consultation. Looking after the mother is an important intervention for the baby and the change would use the mother’s time efficiently and reduce the chance of her getting lost from care.

Integrating mother and baby care by doing the mother’s post-natal CD4 count at the infant’s clinic visit would make sure it was reliably done. This would reduce orphaning and lead to better programme outcomes.

A comic strip (see below) was used as a teaching tool to inspire nurses to follow up PMTCT mothers to prevent orphaning. It illustrates how much work is wasted if a known HIV positive mother remains untreated once the baby is born.

The results

Nurses very soon realized how important this change was. They could make sure the baby’s HIV positive mother was followed up during the months after delivery when her focus was on the baby, and ensure she was appropriately referred for ART.
Through the intervention, mothers also began to understand how important it was for them to stay healthy and alive for their babies.

**Spread and improvement**

The change was spread to an A-Plan sub-district in the Eastern Cape where staff are routinely doing the mother’s repeat post-natal CD4 count at the same time as the baby’s six week PCR. Both mother and baby receive their results at the next clinic visit and each is appropriately linked into care. It is predicted that this intervention will further increase the number of PMTCT mothers receiving postnatal follow up for HIV.

**Other models**

At Rahima Moosa Mother and Child Hospital in Johannesburg, CD4 is performed on all mothers attending the postnatal clinic to check their eligibility for HAART. This is done at two weeks postnatally when they register their babies at the infant follow up clinic. When mothers come for their six-week check up the CD4 count result is known and if indicated, they receive a letter of referral to the adult ART clinic two kilometers up the road.

PMTCT mothers who initiated ART before delivery are also at risk of being lost from ART care after delivery. *Mothers’ Day and a special clinic for the mother/baby pair in Section 1 of this document describe special measures to make sure these mothers are properly supported.*

References:

1. Dr Michèle Youngleson, Institute for Healthcare Improvement (personal communication)
2. Prof Ashraf Coovadia, Department of Paediatrics and Child Health WITS (personal communication)
3. Dr Janet Giddy, McCord Hospital (Personal communication)

Contact:

Dr Michèle Youngleson, Institute for Healthcare Improvement (IHI) – 082 828 8332 m.youngleson@mweb.co.za
Follow up your PMTCT mothers after delivery

ARVs save lives!

Tried & Tested tool for your use
Section 2: Case finding, HIV counselling and testing

This section covers a number of innovative models that increase HIV counselling and testing (HCT).

HCT is the gateway to accessing HIV care. Early diagnosis of HIV is essential to ensure timely referral for ART. Routine HIV testing of inpatients in a rural hospital in KwaZulu-Natal found 70% of inpatients tested HIV positive. Provider-initiated HCT ensures many more clients presenting to general health care services test for HIV. Integrating HIV testing into the clinical consultation increases the efficient and effective use of resources and is patient friendly. A particular form of provider-initiated HCT, Opt-out testing, normalises HIV investigation in pregnancy in a busy antenatal clinic in Durban (see Section 1). Special focus clinics that target men and youth encourage testing in groups that are otherwise less likely to test, and special clinics for healthcare workers (see Section 6) support this particularly vulnerable group.

A sub-district wide campaign in North West Province doubled the number of children referred for ART, and creative community based testing models link pension day, grant application and general health care screenings to HCT.
ACTS – Advise, Consent, Test, Support

Towards routine HIV testing – a provider-initiated HIV testing model

The challenge

Many vulnerable clients pass through the healthcare system without ever being tested because conventional counselling and testing is cumbersome and time consuming.

Only 14.9% of the adult population in the Western Cape province, including antenatal clients, were tested for HIV in 2008 even though adults use the healthcare service on average two or three times a year. There were many lost opportunities when adults could have been but were not tested.

The aim

The City of Cape Town wanted to identify large numbers of patients with undiagnosed HIV infection by making HIV testing a routine part of everyone’s care.

The change

The change was to introduce a provider-initiated model for HIV testing that had been successfully used in the USA and Botswana. The approach is called ACTS: Advise, Consent, Test, Support. ACTS formed the basis of the Botswana Ministry of Health’s national policy on routine provider-delivered HIV testing.

Between 2004 and 2006, 35% of Botswana’s 1.7 million people were estimated to know their status because of routine offering of HIV testing.

ACTS is implemented in a wide variety of public and private medical and community-based settings in the USA and has been used in several municipal campaigns including New York City’s “Bronx Knows” campaign, Washington, DC’s “Come Together and Get Tested DC” campaign and Oakland, California’s “Get Screened Oakland” campaign.

From ACTS promotional material
How ACTS works

- All public health facility clients are routinely offered HIV testing no matter what they attend for.
- Clinical providers - doctors and nurses – provide HIV C&T during routine consultations (in addition to lay counsellors).
- The HIV C&T process is streamlined to be more efficient and less time consuming but still effective.

Advise. Clients are informed that HIV testing is now recommended for everyone in the clinic and that the provider would like to offer to test them for HIV today.

Consent. Providers encourage patients to consent for HIV testing based on South African HIV testing laws/policies.

Test. If a client consents to the test, the provider performs a rapid HIV test. Reactive tests are confirmed with a second rapid test as per the current South African protocol.

Support. Results are given. Providers immediately stabilize newly diagnosed HIV positive patients, link them to HIV treatment (CD4 count test and disease staging), support and prevention services and encourage the client to stay in care. HIV negative patients are given prevention messages to stay negative.

ACTS streamlines the conventional 45-minute VCT pre-test counselling approach to four simple steps that can be delivered in five minutes or less.

(See the HIV Consent and Testing Record Form from Cape Town overleaf, that was developed by Donna Futterman.)

Results

Between 2004 and 2006, the ACTS approach was piloted at the Site B and Site C youth clinics in the Khayelitsha sub-district in Cape Town. In less than six months, several improvements were noted in HIV testing rates increased 41% (from 442 to 624 per month), the percentage of STI clients tested for HIV increased from 13% to 47% and the number of new HIV positive youth identified increased by 49%.

Within the first quarter of ACTs being spread to another sub-district (Tygerberg Sub-District in 2008), clinics showed:

- Tests offered increased by 46%
- Acceptance rate increased from 97% to 99%
- Patients tested increased by 49%
After one month in a secondary hospital in Cape Town (GF Jooste Hospital):

- Tests offered increased by 44%
- Acceptance rate increased by 19%
- Patients tested increased by 145%

Similar improvement in HIV testing had previously been noted in a randomized trial of ACTS in 10 community health centers in the Bronx, New York, from 2002-2005. Data showed ACTS increased HIV testing by an average of 133% compared with 25% in control clinics.

**Benefits of ACTS**

- Patient friendly
- Uses resources more effectively - nurses and counsellors are offering testing
- Efficient
  - Pre-test counselling session reduced from 30-45 to < 5 min
  - Uses provider and patient time better
  - Integrates services (C&T into clinical services)
- Reduces waste
  - No waiting between sister and counsellor
  - Patients don’t have to come back for testing because more can be seen the same day
- Effective – outcomes are better than before
- Improves reliability of care - CD4 taken immediately
- Promotes better follow-up support - lay counsellors free to provide more intensive counselling and support to newly diagnosed clients

**References**

1. Virginia Azevedo, sub-district manager Khayelitsha, Cape Town City Health Report – A Streamlined Counselling and Testing Approach: Briefing to Dexco June 2009
2. SA ACTS Backgrounder Web flyer [www.ACTSHIVTest.org.za](http://www.ACTSHIVTest.org.za)

**Contact:**

Dr Desiree Michaels, founding director of ACTS SA – 021 447 4214, dmichaels@ACTSHIVTest.org.za, [www.ACTSHIVTest.org.za](http://www.ACTSHIVTest.org.za)
ACTS is a provider initiated model for HIV counselling and testing.

The HIV Consent and Testing Record for Adults and Children used for ACTS in Cape Town is given on the following two pages.
# HIV CONSENT & TESTING RECORD FOR ADULTS & CHILDREN

Place Patient Sticker Here

<table>
<thead>
<tr>
<th>Name of Client:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Folder Number:</td>
</tr>
<tr>
<td>Age:</td>
</tr>
</tbody>
</table>

### Reason for Accessing Service

<table>
<thead>
<tr>
<th>Self Referred</th>
<th>Current TB client</th>
<th>TB Suspect</th>
<th>New STI client</th>
<th>MTCT</th>
<th>MTCT Follow-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADVISE CLIENT TO HAVE AN HIV TEST</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept HIV Test</td>
<td>Yes</td>
</tr>
<tr>
<td>First Ever HIV Test</td>
<td>Repeat HIV Test (last test less than 1 yr ago)</td>
</tr>
<tr>
<td>Repeat HIV Test (last test more than 1 yr ago)</td>
<td></td>
</tr>
</tbody>
</table>

If refuse, specify reason:

### CONSENT TO HIV TESTING [Consent of guardian / parent is required if <12yrs]

I hereby consent to having an HIV test.
Ndiyavuma okokuba igazi lam lingahlolelwa isifo sengculazi (HIV/AIDS)
Ek verleen hiermee toestemming vir ‘n MIV toets.

<table>
<thead>
<tr>
<th>Name/Igama/Naam</th>
<th>Client</th>
<th>Parent</th>
<th>Guardian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signature/Usayine/Handtekening:</td>
<td>Date/Umhla/Datum:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name of Provider:</td>
<td>Signature</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### TEST CLIENT

<table>
<thead>
<tr>
<th>Rapid Test Performed by:</th>
<th>Test:</th>
<th>Batch No:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening test</td>
<td>Neg</td>
<td>Pos</td>
</tr>
<tr>
<td>Elisa Test</td>
<td>Neg</td>
<td>Pos</td>
</tr>
</tbody>
</table>

| Date to return for Elisa result: |

### SUPPORT [Post Test]

<table>
<thead>
<tr>
<th>Indeterminate</th>
<th>Negative</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance of returning for Elisa test result</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage Partner Testing / Disclosure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk Reduction Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Condoms issued</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Importance of CD4 count result &amp; HIV Care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of Clinical &amp; F/up Counselling visit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of support group</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Tried & Tested tool for your use**

Designed by Donna Futterman

ICN 999970T9490475
NOV 2009
<table>
<thead>
<tr>
<th>Transmission to baby</th>
<th>ARVs to baby</th>
<th>Using FP method</th>
<th>Method:</th>
<th>Next FP appt:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cough for more than 2 weeks</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight loss more than 1.5 kg in last month</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drenching night sweats</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB contact in house</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transmission to baby</td>
<td>ARVs to baby</td>
<td>Testing to baby</td>
<td>Pap smear Ever</td>
<td>Yes</td>
</tr>
<tr>
<td>Discharge from vagina</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sores on vagina</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharge from penis</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sores on penis</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower abdominal pain</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burning on passing urine</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB Screen</td>
<td>STI Symptom Screen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough for more than 2 weeks</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight loss more than 1.5 kg in last month</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drenching night sweats</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB contact in house</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB Screen</td>
<td>STI Symptom Screen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cough for more than 2 weeks</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight loss more than 1.5 kg in last month</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drenching night sweats</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TB contact in house</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Screening**

**TB Screen**

**WOMEN**

- Discharge from vagina
- Sores on vagina
- Lower abdominal pain

**MEN**

- Discharge from penis
- Sores on penis
- Burning on passing urine

**Family Planning [FP] Screen**

- Using Condoms
- Pap smear Ever
- FP Method [Women & Men's partner]
- Next FP Date

**Management**

- No. of Condoms issued
- Date of f/up counselling
- Date of support group

**Name of Counsellor:**

**FOR COUNSELLOR USE AT HIV TESTING**

**FOR COUNSELLOR USE AT FOLLOW-UP SESSIONS**

**Discussion**

- Risk Reduction Plan
- Partner Testing/Disclosure
- Positive Living [Nutrition, Lifestyle, Exercise, Ongoing Care, CD4]

**Screening**

<table>
<thead>
<tr>
<th>F/up Session 1</th>
<th>F/up Session 2</th>
<th>F/up Session 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date:</td>
<td>Date:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

**Name of PN referred to:**

**Name of Counsellor:**
The male “walk-in” clinic

Dedicated male clinics increase testing rates

The challenge
Khayelitsha in Cape Town has a high prevalence rate of both HIV and Sexually Transmitted Infections (STIs) but not enough men were testing for HIV.

The aim
The aim was to increase the number of men testing for HIV.

The change
The idea was to create a male-friendly environment where men would feel comfortable to test for HIV.

To be male friendly, the clinic would be in an accessible location, open during accessible hours and staffed by people men could comfortably relate to.

The Male Clinic would offer Sexually Transmitted Infection (STI) diagnosis and treatment in addition to HIV testing services.

The approach would be non-judgemental and focus not so much on abstinence, but rather on the reduction of sexual partners and would promote condom use for the client’s own protection from re-infection with sexually transmitted infections.

How it works
The first male clinic in Khayelitsha started in 2007 behind a busy taxi rank in two 12-meter containers with four consulting rooms, one waiting room, one staff toilet and a kitchenette. Water, electricity and telephones were connected.

The clinic is staffed by one male Xhosa-speaking registered nurse and three lay counsellors and is open Mondays through Fridays from 12h00-18h00 and Saturdays from 10h00–15h00.

Policies, guidelines, stationery and the provision of medical and other supplies are taken care of as for primary care clinics and data is submitted to the sub-district Health Information Officer. The municipal health department provides training, mentorship, direct monitoring, supervision and an audit of quality of care through the sub-district TB/HIV Coordinators. To ensure continuity of services, a locum Registered Nurse is employed when the contracted registered nurse is on annual leave.
STI diagnosis and syndromic management are offered in addition to HIV testing.

Condom use is demonstrated, condoms are distributed and contact slips are issued for partners to attend the municipal clinic nearest to their residence.

Clients testing HIV positive receive post-test counselling and all clients are referred to their closest municipal clinic for further investigation and follow-up (e.g. staging, laboratory testing, support, etc).

The outcome

The male clinic tests a quarter of all men testing for HIV in Khayelitsha sub-district and sees more male STI cases than any other clinic in Cape Town.

The graph shows the number of men tested at each primary care site in Khayelitsha in third quarter of 2009. The male clinic tested far more men than any other facility.

The Men & HIV Project in Johannesburg

Even though there is a high use of STI services in inner City Johannesburg, awareness and practice of safer sex is low - 51% of men reported having 2 or more concurrent partners and 78% reported only sometimes using condoms with their partners.

The Men & HIV Project has a large outreach component with an outreach worker and 10 peer educators linked with other special services such as the Youth Friendly Services and Women at Risk Project in partnership with NGOs in the inner city of Johannesburg.

References:
1. Dr Virginia Azevedo, sub-district manager, Cape Town City Health (personal communication)
2. Terms of Reference. MALE WALK-IN CLINIC FINAL DRAFT - 01 February 2007 Clarification of terms of reference. (Provincial Government of the Western Cape, Cape Town City Health, Médecins Sans Frontières (MSF) and Hope World Wide (HWW)).
3. RHRU 2009 Towards Best Practice: Programmes, Projects and Systems to Expand HIV Care in Inner City Johannesburg

Contacts:
1. Dr Virginia Azevedo, Cape Town City Health Department – virginia.azevedo@telkomsa.net
2. RHRU – 011 358 5300, info@rhru.org www.rhru.co.za
Youth clinics
Youth-friendly reproductive health clinics

The challenge

The HIV & AIDS and STI Strategic Plan for South Africa: 2007-2011 prioritizes increasing the number of children and youth testing for HIV.

A folder review in Khayelitsha underscored the clinical needs of many newly diagnosed youth: 35% had CD4 counts < 350 cells/µl (8% CD4 < 200 cells/µl and 27% CD4 200-350 cells/µl).

The aim

To increase access to sexual and reproductive healthcare services for youth.

The change

Two Reproductive Health Youth clinics in Khayelitsha offered YOUTH FRIENDLY services to youth under 25 years old.

Staff were picked for being young and friendly
The outcome

Thousands of young people attend the clinics every month. The clinic that offers TB treatment has a particularly high patient load.

**Youth sites make a big contribution to HIV testing in Khayelitsha.**

The acceptance of HIV Testing and Counselling (HCT) is high.

However, there are a high number of pre-ART defaulters with only 38% returning for CD4 results.²
Infection control is universally practiced at the Youth Clinic. TB patients are not exposed to stigma.

Despite this, the number of young people on ART is increasing and outcomes for those who do initiate are good. Of the 273 that have initiated, 92% remain in care or have transferred elsewhere, 3% have died and 5% have been lost to follow up.

**A major problem identified is that teens are not attending the Youth Clinics.**

Although the Youth Clinics were very well attended by youth between 20-25 years, only 10% of all youth in Site C Youth Clinic are younger than 18 yrs and 33% are younger than 20 years. In addition, 54% of HIV tests taken by teenagers (<18 years) were provider initiated for teens presented to the Youth Clinic requesting termination of pregnancy. The mean age of sexual debut in South Africa is between 16-18 years.

**Along with high teen pregnancies across the country, these findings underscore the urgent need for reproductive health services models that specifically meet the needs of teenagers and learners.**

References:
2. Report – A Streamlined Counselling and Testing Approach: Briefing to Western Cape Healthcare Management Team Dexco June 2009
3. Presentation, Monitoring of Youth Clinics & Challenges faced, Bernhard Kerschberger, Médecins Sans Frontières Jan 2010

Contact:
Dr Virginia Azevedo, Cape Town City Health Department – virginia.azevedo@telkomsa.net
Finding HIV positive children

A campaign to improve health care worker skills in identifying HIV-infected children in a rural sub-district

The problem

Many HIV-infected children in Ditsobotla Subdistrict, North West Province, were not accessing Antiretroviral therapy (ART) or were accessing treatment late, sentencing them to death without treatment or poor neurological and developmental outcomes if delayed.

The aim

The aim was to ensure that children living with HIV/AIDS accessed optimal treatment and care by improving front-line healthcare workers' knowledge of paediatric HIV issues and increasing their diagnostic and referral abilities.

The change

The change was to involve front-line healthcare workers at the entry points to paediatric care, in quality improvement planning and use these platforms to increase awareness and build capacity for paediatric case finding.

How it worked

The intervention targeted hospital-based entry points, including out-patient departments (OPD) and wards, as well as primary health care (PHC) facilities.

A multidisciplinary Improvement Team from NGO partner ECHO visited health facilities to hold small group discussions with front-line healthcare workers, to give demonstrations and to assist them to use quality improvement methods to identify problems, plan changes and monitor progress.

After initial demonstrations and discussions, regular follow-up visits were conducted to support quality improvement implementation and to monitor registers for screening, testing and referral of children in need.

During these discussions the following topics were covered:
1. Background about the dire situation for infected children
2. The common signs and symptoms of HIV/AIDS in children
3. The promotion of ARVs as effective and safe paediatric HIV/AIDS treatment
4. The referral criteria and HIV care systems
Phase 1 of the campaign was initiated at the two District hospitals in the subdistrict to ensure fast-tracking of those children most in need of immediate treatment and to prepare them for receiving higher numbers of infected children referred from PHC facilities. Phase 2 targeted all PHC feeder clinics referring to the hospitals to ensure ongoing early identification of children before they developed serious illness.

**Results**

Nurses at health facilities showed increased knowledge and ability in Paediatric HIV management. This was demonstrated by a marked jump in first visits to the ARV Initiation sites at the District Hospitals after implementation of the campaign (see graph below). All the children presenting for care at the ARV sites were successfully initiated onto ART. This higher number of children accessing care each month has been maintained over time and may be reaching the estimated need in the community, using a mother to child transmission (MTCT) rate of 10% as is recently reported by the clinics (DHIS).

**References:**


**Contacts:**

1. Echo Head Office – 011 547 5000

---

The red and green lines on the graph show the need for paediatric ART at transmission rates of 15.1% and 10% respectively. The number of children referred for ART (blue line) now falls between these two lines indicating that most HIV positive children are now being identified and referred for ART.

---

**PCR Dry Blood Spot (DBS) Demonstration**
Two outreach interventions increased HIV testing in deep rural KwaZulu-Natal

**The problem**

Ekombe, in Uthungulu District is a very small, rural hospital deep in KwaZulu-Natal. Often the hospital is difficult to reach because the roads are washed out by heavy rains. Many people in the community have great difficulty accessing the hospital for HIV services and only present once they are very ill. HIV testing at the hospital averaged less than two people per day (1.7 per day).

1. **Linking HIV testing to pension day**

**The change**

*Outreach HIV counselling and testing was linked to pension days.*

On pension day in this area, pensioners are paid from the back of an armored truck that comes to the community. In addition, a community market is held on pension day bringing hundreds of people together. The outreach team took a tent to the market to offer shade from the sun and privacy for HCT sessions.

**The outcome**

The outreach team was able to test between 10-30 people each pension day, greatly increasing testing numbers from the previous average of less than 2 HIV tests a day when testing was done only at the hospital.

2. **Testing inpatients for HIV**

**The change**

*Testing was offered to patients who had been admitted to the wards.*

A counsellor asked each inpatient, individually, if they would accept an HIV test, describing to the person at the bedside or, for more privacy in a small room attached to the ward, why it was important. The intervention first started with the TB ward and then extended to the male, female and pediatric wards.
The Outcome

Patients were open to being tested and the testing rate at the hospital increased four fold from 1.7 to 7.5 a day. 70% of in-patients tested HIV positive. HIV testing was demonstrated to be an essential aspect of diagnosis and treatment and patient testing was adopted as standard practice.

Reference:
HIV/AIDS Improvement Project Report Institute for Healthcare Improvement

Contact:
Brandon Bennett – bbennett@IHI.org
World AIDS Day jamboree

HIV testing and cervical cancer screening linked to a ‘one-stop shop’ for social grants

The problem

Access to child grants requires coordinating services between a number of government departments and is especially challenging for communities living far from public services. Community outreach for HIV counselling and testing (HCT) is also a challenge.

The change

The sub-district office of the department of health decided to link HCT (as part of a comprehensive health screen activity) with an outreach by social services to improving access to social grants. Representatives from all relevant government departments were brought together to provide health and social services at a central venue in a remote community over a period of two days so people could access a range of services in one location.

Combining health and social services together was the focus to attract wider participation.

How it worked

The Department of Health initiated the event and worked with local leaders to plan the “Jamboree”, to bring services such as the South African Social Security Agency (SASSA), Department of Social Development, Magistrate Offices and Home Affairs...
together with health services, to an underserved community located very far from
typical social service points to mark World AIDS Day. HIV counselling and testing
were part of the planned activities.

**Door-to-door campaign**

Prior to World AIDS Day and the Jamboree, a door-to-door campaign was planned
to promote the event and provide outreach on health and social services. Seven
villages, served by a single clinic, were targeted for the campaign. Community
workers formed part of a team of volunteers that visited each household to notify
the community and invite them to the event. This was done to identify families prior
to the Jamboree, in need of any social grant and to identify those that were destitute.

*Health promotion was also part of the door-to-door campaign and a
questionnaire was used to identify health related needs and provide
education on issues like HIV/AIDS, TB and chronic diseases like hypertension
and diabetes.*

Not many households had grant-related problems but many families needed to be
referred for Social Relief of Distress.

Those that needed grants were mothers with new-born babies. However, they
already knew how to access the Child Support Grant. In the seven villages visited,
12 people were identified to be in need of Foster Care Grants. The rest of the

Combining HIV/AIDS education and services with other services
such as comprehensive healthcare screening and accesses to social grants
normalizes HIV and reduces stigma.

Door-to-door campaigns and jamborees are useful models to reach
remote communities.
households were either receiving Child Support Grants, Disability Grants, and/or Old Age Grants. These grants were often the only income most of the families were receiving and were used to feed the whole family.

The outcome

The door-to-door campaign was a successful tool used to mobilise the communities and many people attended the Jamboree. HIV testing, coupled with other health screening services, was well utilized.

88 people tested for HIV (56% were men) and 8% were HIV positive
All 12 Foster Care Grant applications were successful.

In future, it was felt that the Department of Social Development should be part of the campaign as many questions related to the delay in administration of Foster Care Grants and many social issues needed their attention.

Reference:

Contact:
Kheth’Impilo – 021 447 / 0822
With the new 2010 ART guidelines, ART will become available in even the most remote primary care clinics, dramatically increasing access to ART.
Section 3: Decentralising ART and decongesting large ART clinics

This section covers various models for decentralizing ART care to the primary care level and for decongesting large ART clinics.

*Down Referral* is a model of moving stable patients on ART from large tertiary and secondary ART sites to primary care clinics. *Private General Practitioners* can also be employed to support public health patients and outreach is a model for *Jump-starting ART initiation in primary care* using the support of existing sites.

*Nurse driven models of care* are essential if ART initiation and maintenance is to become routine in all primary care clinics (PHCs). Mentoring and support for new sites can be given through Roving Teams that allow the expertise of a few clinicians to support multiple PHC sites.

*Task shifting* from doctors to nurses and from nurses to nurse assistants and lay healthcare workers is essential to avoid bottlenecks in care. *Section 6* includes a number of models for training nurses to initiate and manage ART and for *sharing the clinical load with mid-level and lay healthcare workers*.

Decentralising ART initiation to primary care will remove the pressure on central initiation sites because the majority of patients will no longer be referred up for initiation. Congestion may still be a factor at existing large sites and will in time...
become a challenge at PHC sites as they to begin to develop large cohorts of chronic care patients on ART.

*Chronic Care Adherence Clubs* provide an innovative model for decongesting large ART sites without further burdening down referral sites. This lay-worker model for ART care may provide a solution for decongesting PHCs as large cohorts develop over time. The model for improving efficiencies in the dispensing of chronic medication for non-communicable diseases through a *Central Dispensing Unit (CDU)* may be a solution for the dispensing of ART at scale.

See the companion report to this document on current and potential community care worker roles:

*Mainstreaming HIV and AIDS into the Primary Health Care System: A Review of Current and Potential Community Care Worker Roles.*
Report to the Department of Health and UNICEF
Prof Helen Schneider, et al.
Centre for Infectious Diseases Epidemiology and Research
School of Public Health & Family Medicine
University of Cape Town
April 2010
The report is available at:
[http://www.cider.uct.ac.za/about/about.php](http://www.cider.uct.ac.za/about/about.php)
Down referral of chronic stable ART patients

Alleviating congestion at ART sites

ART sites with large numbers of patients in care become difficult to manage – access to ART and quality of care may be compromised as clinics grow in size.

The problem

Initiations in the three ARV clinics in Region F in Johannesburg were rapidly increasing with over 400 patients initiating each month. ART sites were becoming congested, waiting lists were becoming longer and quality of care was being compromised.

The aim

The aim was to relieve congestion at the three large initiation sites in order to continue increasing ART initiations and at the same time enable patients on ART to receive care closer to where they live.

The change

*Patients stable on ART were down referred from the central initiation sites to primary care clinics.*

This required:

- Training primary care (PHC) staff to manage patients on ART and on chronic management in general
- Identifying logistical/drug management problems
- Identifying gaps in the system and where patients are lost to care

How it worked

The leadership of the Provincial and City of Johannesburg Departments of Health worked closely with ART and primary healthcare clinics as well as with NGO partner, Reproductive Health and HIV Research Unit (RHRU).

- The leadership improvement team met monthly to review data, monitor progress and identify problems for intervention
- Four initial down referral sites were selected
- Down referral sites were supported by extra staff including nurses, counsellors, data capturers and a doctor on call
- Stable patients were identified at the initiation sites for down referral
- ART drugs were pre-packaged at ART initiation sites and distributed once a month
- Patients were referred back to the initiation sites only if complications needing physician attention arose

Results

3,000 patients were down referred to the four PHC sites in 20 months.

Staff based at the hospital and community healthcare ART initiation sites were initially hesitant to down refer their patients. Insecurity and reluctance to refer continue to be experienced by some doctors and patients. Despite this, the down referral process has been successful overall and chronic ART management in the PHCs has had many advantages for patients, families and the clinic staff.

The down referral model sufficiently decongested the central sites to enable them to continue, and even increase the enrollment of new patients.

The graph shows the number of ART initiations and down referrals per month. Monthly ART Initiations steadily increased over time compared with down referrals that peaked for a few months and then settled at a steady rate.

More patients are initiated on ART than down referred, which will again lead to congestion of the initiation sites in time. Other models showcased in this section, such as ART initiation in PHCs and Chronic Care Adherence Clubs, may offer alternative or adjunctive solutions to decentralisation of care and decongestion of these high volume sites.
Section 3: DECENTRALISING ART AND DECONGESTING LARGE ART CLINICS – Down referral of chronic stable ART patients

Frontline healthcare workers, provincial department of health and district managers at a symposium share experiences and models for down referral. Johannesburg, February 2009

The graph shows the cumulative number of ART initiations and down referrals over time. More patients are initiated on ART than down referred.
Clerk identifies stable patients for down referral

Reference:
RHRU 2009 Towards Best Practice: Programmes, Projects and Systems to Expand HIV Care in Inner City Johannesburg

Contact:
Winnie Moleko – 011 725 7700, wmoleko@rhru.co.za, www.rhru.co.za
General practitioners share the sub-district ART load

A private/public sector partnership to solve pressing public sector problems

The GP model uses clinical and infrastructural resources in the whole healthcare system – public and private – to support the growing numbers of public service patients on ART.

The problem

Klerksdorp Tshepong Hospital complex is responsible for the National Department of Health’s ART programme in the Dr Kenneth Kaunda District in North West Province (NWP). By 2005 it was becoming clear that the hospital would not be able to cope with the growing number of patients requiring ARVs.

The change

*GP* makes chronic public sector patients to relieve pressure on the hospital ART site.*

The hospital, assisted by BroadReach Healthcare – a healthcare solutions company, linked with KOSHMED Doctors Network, an existing network of private general practitioners (GPs) to enlist GPs to help manage chronic ART patients from the hospital ART site in order to decrease patient congestion.

All the ART drugs, visits and laboratory monitoring schedules follow the public health guidelines and GPs receive external funding for managing public sector ART patients so patients do not need to pay themselves.

Results

By December 2009 1695 stable public health patients on ART had been down referred from Tshepong Hospital to the 18 private General Practitioners in the KOSHMED Doctors Network.

Of the 1695 public sector patients that had been down referred to GPs, 1349 (79.6%) were currently on treatment, 290 (17.1%) had transferred out, 39 (2.3%) had died, 12 (0.7%) had been lost to follow up and 5 (0.3%) had defaulted. As of December 2009, 92.5% of public sector patients still in care with GPs had suppressed viral loads.
The Model of Care

- Patients stable on ARVs choose between down-referral to a GP or to their primary care clinic (PHC)
- 18 Koshmed GPs are in the down referral network
- GPs are trained in HIV/ARV care with ongoing clinical mentorship and oversight
- GPs are paid by BroadReach Healthcare (PEPFAR funded) at a rate negotiated with the hospital (currently lower than standard GP rates)
- Tshepong Hospital dispenses the ART and distributes it to the GPs
- If patients miss a scheduled drug pickup for more than a week, treatment is suspended, the patient is recalled and the situation assessed
- GPs refer patients back to the hospital for all non-HIV care and HIV-related complications, adverse events, opportunistic infections, antenatal care and regimen changes
- The NHLS Laboratory does the laboratory monitoring
- A monitoring, evaluation and reporting team collects data, highlights gaps and reports to all stakeholders
- All partners meet together on site to implement improvements

The graph shows various parameters of the GP programme: the purple line shows the cumulative number of people currently in the GP programme. By December 2009, 1349 patients had been down referred to GPs and the Blue line shows the number of people down referred to the GP programme over time.
The number of patients down referred to GPs is dependent on hospital and patient preference, which is usually dependent on locality. The majority of clients from the vicinity of the GPs have been down referred and the backlog cleared from 2005.

Spread

In agreement with the North West Department of Health the GP Down Referral model was implemented at Potchefstroom Hospital in early September 2009 with six GPs recruited, trained and managing public patients. More GPs have subsequently applied to join the programme.

References:
BroadReach Healthcare – a healthcare solutions company:
1. NW partnership Model Summary Jan10 2010
2. Down Referral Symposium, Mafeking, 4 August 2009. Modeling Down-Referral. Lessons from Tshepong Hospital, Klerksdorp

Contact:
Dr Kamanga, BroadReach Healthcare – 021 514 8300, mkamanga@brhc.com, www.brhc.com
Triage: red and green clinics

Triage allows the best use of limited resources to provide targeted adherence support

The problem

To support large cohorts of patients on life long antiretroviral therapy, limited human resources need to be used effectively and efficiently. Adherence is the cornerstone of successful treatment, but not all patients require the same degree of adherence support – some patients adhere well with minimal support and others require more intensive support.

The change

Triaging the patients according to clinical outcomes and their adherence record allows different amounts of adherence support to be given to different groups of patients according to their need for support. Counsellors’ time can then be prioritized to support new and vulnerable patients more intensively, and good overall adherence outcomes can still be achieved.

How it works

The clinic uses a system of stickers on the patient’s clinic folder to easily identify how much support each patient needs. The process is described below:

All new patients need intensive adherence support when they first start ART.

New patients have NO sticker on their folder until after the first follow up viral load (at between 4-6 months on ART). All new patients receive Standard Adherence support:

- Measuring adherence at every visit. This could include pill counts, pharmacy pick-ups or other validated adherence tools
- Reinforcement of adherence messages by clinical staff at all visits
- Attendance at support groups

After six months on ART, clinical staff triage patients to receive green or red stickers on their folders according to their adherence record and the results of the first viral load.

Partners:
Desmond Tutu HIV Foundation
Western Cape Provincial Department of Health
Cape Town City Health

Location:
Guguletu
Cape Town
All of Western Cape Province

NO STICKER  = NEW PATIENTS
GREEN STICKER  = STABLE ON ART
RED STICKER  = ALERT, AT RISK OF TREATMENT
Green - Patients on regimen 1, who have completed over 6 months on treatment with their most recent viral load under 400 copies/µl.

Red - Patients with an adherence percent (at any time) of < 90% or a viral load >400 copies/µl.

A sticker on the folder alerts healthcare workers to the amount of support each patient needs.

“Green” patients become “red” as soon as there is any indication of suboptimal adherence including a raised viral load.

Once patients have been colour coded red the following occurs:

- The patient’s number must be recorded and added to the red code list for discussion at the next weekly meeting.

- If the red code is assigned at a doctor’s visit, the doctor must personally notify a counsellor that the patient needs adherence monitoring.

- If the red code is due to a raised viral load, the patient’s counsellor must be asked to recall the patient for a doctor’s visit.

- The counsellor must request the patient to attend a red code counselling session (see following page for the Red Alert Counselling tool).

- The patient’s counsellor must visit the patient at home in the week following the allocation of the red code and thereafter on a monthly basis.

- At the next home visit, the counsellor must spend some time with the client discussing correct dosing practice and adherence issues.

- The patient must receive individual counselling at each visit to the clinic.

- The doctor must check the patient’s adherence on a monthly basis until the red code is stopped.

- A pillbox should be offered to the patient.

See Appendix for Red Alert Counselling Forms

For patients with a viral load >1000 copies/ml:
The viral load should be repeated 4 to 6 weeks after the red code has been assigned and the above procedures have been commenced.

- If the viral load remains above 1000, the patient has failed their regimen and should be considered for Regimen 2.
- For viral loads between 400 and 1000, increased support is continued as above, and the patient is monitored four-monthly.

*If the viral load falls below 50 copies, the red code can be removed and the patient gets a green sticker.*

The Outcome

The mortality risk at the green clinic is low, indicating that it is safe to treat a selected group of patients in a nurse driven, doctor supported clinic. Over 98% of patients at the Green Clinic were still alive three years into the programme.

This system of triage, and management of cohorts depending on the intensity of support they need, was developed by the Desmond Tutu HIV Foundation and was subsequently incorporated into the Western Cape’s Provincial Policy Guidelines to promote adherence to antiretroviral therapy.²

References:
1. Dr Richard Kaplan, Desmond Tutu HIV Foundation (personal communication)
2. Western Cape Provincial Department of Health: Policy Guidelines to promote Adherence to Antiretroviral Therapy in the Western Cape 2009

Contact:
Dr Richard Kaplan – 021-633-5963, Richard.Kaplan@hiv-research.org.za
Welcome

You have been asked to attend this session because you have either a raised viral load or poor adherence.

**What is a raised viral load?**

When we take your blood and send it to the lab we see lots of HIV in your blood. If your ARV treatment is working well, we should be able to see very little or no HIV in your blood.

**What causes a raised viral load?**

1. Poor adherence – that is, not taking your tablets properly – either missing some doses or taking them at the wrong times

2. Viral resistance – this means that the ARVS you are taking are no longer able to fight the HIV in your body (more about this later)

**How do we know which is the cause?**

If you start taking your tablets well, and the viral load goes down, we know that it was raised because you weren’t taking your tablets well (poor adherence)

If you start taking your tablets well and the viral load stays the same or goes up, then you have viral resistance.

A **viral load of 1000 or more** is especially serious. If you have this result twice in a row, you may be told that you have failed first line ARVs and that you need to change to second line ARVs.

**ADHERENCE**

This means taking your tablets correctly – taking all the tablets you are supposed to take every day and at the right times.

**What is good adherence?**

Good adherence is taking 95-100% of your tablets. That means not missing your tablets more than twice in a month.

**What is the danger of poor adherence?**

You could develop viral resistance – your ARVs no longer working to fight the HIV in your body.

**FACTORS LEADING TO GOOD ADHERENCE**

1. Accepting one’s HIV status

2. Disclosure

3. Good support from family/friends

4. Understanding the importance of good adherence

5. Participation in a support group

**FACTORS LEADING TO POOR ADHERENCE**

1. Denial

2. Non-disclosure

3. Poor support

4. Alcohol/substance abuse

5. Depression

6. Poor understanding of the importance of adherence

7. Relationship problems

8. Unstable housing

**ADHERENCE TOOLS**

1. Pillbox

2. Cellphone alarm

3. Ticksheet

4. Treatment partner
SOME POINTS ABOUT ADHERENCE:

- With first line ARVs, it does not matter if you take your tablets before or after eating.

  **You will not get sick if you take them on an empty stomach.**

- Try to always take your ARVs at the correct time. If, however, you realise later that you have forgotten to take your tablets, take them immediately, no matter how much later it is. The longer your body is without ARVs, the greater the risk of developing viral resistance.

  **Better late than never!**

- It would be best if you didn’t drink excessive alcohol, but if you are still struggling with this, then do take your ARVs at the correct time, even if you have alcohol in your body. It will not make you sick. If you miss your tablets you are at risk of developing viral resistance. If you would like help to stop drinking, ask your doctor/nurse/counselor for a referral to SANCA.

- When you **choose a time to take ARVs** eg 8 o’clock, choose a time that suits your lifestyle.

  Choose a time when you are usually awake, not asleep.

  Some working people find that it is easier to remember to take their tablets before they start work.

  Stick to the same time on weekends/days off.

- If you are **taking Efavirenz and work nightshifts**, speak to your doctor/counselor if drowsiness after taking it is problematic.

- If you think you are having **side effects** from ARVs, speak to your doctor/counselor. We will probably be able to help. Don’t just stop taking your ARVS.

- **If you need to leave Cape Town, either on a planned trip or in an emergency:**

  Always make sure you will have enough ARVs for the length of your trip.

  If you don’t have enough or you are not sure, come to the clinic, even if it is not your date – we will usually be able to give you more ARVs.

  If it is a planned holiday make sure you will have transport money to return to Cape Town.

  If, however, you’re away from Cape Town and you find you’re going to run out of ARVs -

  Find out if there is a clinic/hospital providing ARVs where you are and report to them as soon as possible.

  If there is not phone Hannan Crusaid and speak to one of the doctors about how to stop your ARVs so that there is the least chance of viral resistance developing. The worst thing you can do is to carry on taking only one or two ARVs when the other ones are finished because your HIV could quickly become resistant to that ARV.

- If one or more of your ARVs are finished before the date on your card or if you realise that you have been given the wrong ARVs by mistake, come to the clinic immediately.

- **Drug holidays**

  Some people who have to take tablets every day feel that they would like a break from taking tablets. Doctors have researched whether it’s OK to stop taking your ARVs for a while and then start them again. They have found that it’s NOT a good idea. Your CD4 count drops quickly when you stop ARVs and you are at risk of developing a serious illness.
**VIRAL RESISTANCE**

This means that the ARVs you are taking are no longer able to fight the HIV in your body.

**What causes viral resistance?**

It is usually caused by poor adherence - having taken your tablets badly at some stage during your ARV treatment.

**We’ll use an example to explain this.**

Let’s imagine the ARVs in your body are the police and the HIV in your blood is the criminals.

Before you start taking ARVs, you have a high viral load (lots of HIV in your blood) – that is – there are many criminals around. There are no police.

Then you start taking ARVs – the police appear. If you take your ARVs correctly, the police will do a great job making all the criminals disappear. Your viral load will go down.

If you don’t take you ARVs well, it is like the police being ‘short-staffed’. There are not enough policemen to catch the criminals and your viral load goes up.

When there are lots of criminals around they get clever and discover new ways of making sure that the police can’t catch them. Then even if you start taking your ARVs properly and all the policemen come back on duty – they still can’t catch the criminals – viral resistance has developed.

To catch these clever criminals, we now need to get a new set of policemen - the ‘Scorpions’ who have different tactics to catch the criminals. The Scorpions are the second line ARVs.

HIV is different to other illnesses like high blood pressure or diabetes. If you do not take your blood pressure tablets well one month, your blood pressure will go up, but if you take them well the next month, it will go back down again. Your blood pressure can never become resistant to the blood pressure tablets – they will always work if you take them properly.

But with HIV, you have to take your tablets twice a day, every day to have the best chance of preventing viral resistance.

Let’s prove them wrong.
Decongesting high volume ART clinics without burdening PHCs

This model offers adherence support to long-term ART patients and allows high volume ART sites to successfully decongest without “passing the load” onto more peripheral clinics.

The problem

As the number of patients in chronic ART care grows, clinics become congested and find it more difficult to support the long-term retention in care of patients on ART while simultaneously increasing the number of new patients initiating ART.

Down referral can relieve congestion by moving patients to primary level for chronic ART management but this model may not provide all the answers as many patients refuse to move to peripheral clinics and primary care sites themselves reach capacity in time.

*Models are needed to manage the ever-growing numbers of patients in long-term ART care.*

The change

The Adherence Club is a patient friendly task-shifting model for the management of stable patients on ART.

*Adherence Clubs are group clinic visits run by lay health workers who dispense pre-packed ARVs.*

The clubs are available on a voluntary basis for adult patients stable on ART for 18 months or more with undetectable viral loads from the two most recent counts. The period of 18 months was chosen to minimize the risk of developing symptomatic hyperlactataemia (SHLA) with the use of D4T.

Clubs comprise a maximum of 30 patients who meet every two months; they are reminded of their appointment by text message the day before. Patients belong to a specific club and come on the same day with the same group, which creates strong peer bonds over time.

Folders are prepared the day before with blood results, completed lab forms, etc. Medications are either packed by pharmacy the afternoon before or early in morning once patients have arrived. Patients receive a two month supply of medication at each visit. Medication can be issued to a third party every second visit.
The group starts at 8:30 and lasts about 2 hours. It is run by a counsellor and ‘club facilitator’ who is a peer counsellor/supporter.

On club day:

- the group meets in a room
- members are weighed and asked for signs and symptoms of opportunistic infections or adverse events
- A prepared talk is given on a relevant topic – sometimes the group requests information on a particular topic
- If safety bloods are required, the patient is referred to the nurse
- Two months of pre-packed medications are given after everything has been completed

Should a person develop a problem, whether an opportunistic infection, a serious adverse event or a detectable viral load, or miss two or three consecutive club dates (proxies can be sent to collect meds on alternative club dates), they are temporarily withdrawn and referred to a clinician. All patients are seen by a clinician every six months.

The outcome

*After two years, by the end of 2009, Ubuntu clinic had 13 clubs with 700 people enrolled.*

Benefits of the clubs are:

- less congestion at the ART clinic, leading to increased monthly enrollment
- reduction in loss to follow up of patients attending clubs
- reduction in time spent at each clinic visit from 3-4 hours previously to 2 hours for patients attending the clubs
- more time for clinical staff and counsellors to initiate new patients or look after difficult cases

By the end of 2009 there were more than 4,400 patients on ART at the clinic and many more requesting enrollment to clubs.

*One of the limiting factors has been pharmacy capacity to pre-pack ARVs. A possible solution may be to extend the Chronic Dispensing Unit, which centrally prepackages medication for non-communicable chronic diseases, to include ART.*

(See *Chronic Dispensing Unit*, the next model in this section.)
Future vision

The vision is to take the clubs off-site into the community, increase the meeting frequency from two to three months and, as we move away from D4T as a first line option, and enroll long-term stable patients at 12 rather than 18 months.

Reference:

Contact:
Anna de Vries, Médecins Sans Frontières – 021 364 5490, www.msf.org.za
Bottlenecks at pharmacies add to long waiting times at community healthcare centres.
Centralised dispensing

Outsourcing and prepackaging chronic medicines for a variety of non-communicable chronic diseases reduces the load on public health facilities

Central dispensing and packaging of chronic medications for non-communicable chronic care conditions offers a potential model for managing large numbers of stable patients on ART.

The problem

The Western Cape has a very high burden of non-communicable chronic disease with the highest self-reported incidence of diabetes, arthritis, asthma and elevated cholesterol levels in the country. ¹

Bottlenecks at the pharmacies were adding to long waiting times at community health centres (CHC). Dispensing at CHC pharmacies was inefficient because of limited technology and few staff, with chronic prescriptions often including multiple items. Recruiting and retaining pharmacy staff had become a major challenge because working conditions were difficult.

The change

The dispensing of prescriptions for chronic non-communicable conditions was outsourced to a central unit, the Chronic Dispensing Unit (CDU).

How it works

Prescriptions for stable chronic patients are collected from health facilities. Medicines are then dispensed at the central CDU, packaged in tamper-proof parcels identified with outer labels and returned to the facilities where patients collect them. Patients no longer sit in long queues but collect their pre-packed medicines at a fast-track window at the pharmacy.

The CDU is an outsourced service run by Institutional Pharmacy Management (IPM).

Results

The CDU today dispenses around 130,000 prescriptions per month. These are delivered to various health facilities, mainly 48 community health centers and two district hospital outpatient clinics in the greater Cape Town area, plus 10 clinics in the rural area of Vredenburg, 145 km from Cape Town.

---

1. The problem section includes a footnote or reference (¹), but the specific reference is not provided in the text. It can be inferred that the full reference is provided elsewhere in the document or source material.
Waiting times for chronic care patients at community health centres have decreased significantly. Patients who are employed and previously took a days’ leave every month to wait for their medicines, can now be helped often within 20 minutes, and still return to work.

The pharmacy staff experience a less pressurised work environment, with less aggression from patients who previously sat in a full waiting room for four hours or more.

Patients perceive the new system as a great improvement. Because they must be stable on treatment to qualify as a CDU patient, some have been spurred on to comply with treatment to become a “green sticker” patient (patients who are classified as stable are identified easily by green stickers placed on their file).

Initially the service of delivering ready-dispensed patient medicine parcels freed pharmacy staff to perform more counselling of patients but once people realized waiting times were shorter, more people started attending the health service to access their chronic medicines. CDU has therefore increased the utilization of the healthcare system. Spending on medicines at primary care consequently increased, but this may be balanced by a deceased demand for inpatient services in time.

Spread and innovation to ART

The CDU system can provide legally dispensed medication to nurse-driven clinics, reducing the workload on nurses (who then do not have to dispense medicines themselves).

References:
2. Joan du Plessis, W Cape DOH project manager (personal communication)
3. Joan du Plessis Presentation: Chronic dispensing Unit: Where it all started 2010
4. Joan du Plessis 2007 CDU summary internal document

Contact:
Joan du Plessis – 021 938 6093, 082 923 7396, jdplessi@pgwc.gov.za
Jump-starting ART initiation in primary care

Addressing an urgent need for ART using an outreach model

Nearly 50% of newly referred patients did not arrive at the ARV clinic for initiation

The problem

There was only one central, hospital-based ART clinic for a population of 180,000. The National Strategic Plan (NSP) target for ARV initiations was 65 a month but the hospital was achieving a monthly average of only 18 initiations (28% of the NSP target). Data showed that only 50% of the new patients referred for ARVs arrived at the ARV clinic. The hospital was geographically inaccessible.

Many patients were too sick, too poor or too unsure to get to the hospital ART clinic.

The aim

The aim was to meet the NSP target for initiation and make sure 100% of all referred patients arrived at the ART initiation site.

The change

If patients could not get to the ART clinic, then the ARV clinic would go to the patients.

Most HIV positive patients came from one clinic in the referral network that served a large informal settlement
The accredited ART site decided to take its whole ART team from the accredited site and start an outreach ART service at a Community Health Centre (CHC), the primary level facility that had the highest burdened of HIV in their referral network accounting for 70% of all referrals for ART. Having an ART service at the high burdened site would bring ART closer to the majority of patients in the referral network and put their limited resources to good use.

The process

The outreach team and CHC staff developed the outreach clinic together.

Although the CHC had very little space, they knew their patient’s desperately needed on-site initiation and found a way of providing a few rooms on one day a week - even the dentist’s room was used for preparing patients.

*They started with just a few patients, gradually increasing enrollment while the systems were being set up.*

An improvement team of PHC and hospital staff met twice a month to review progress, identify and resolve problems and plan the next steps.

The need for ARVs at the CHC was so great that initiations increased much faster than anyone had anticipated. The clinic was quickly outgrowing its space but the success of the outreach had been demonstrated and within a year, the NGO “Absolute Return for Kids” (ARK) provided a five room temporary structure for the ARV clinic and the municipality provided additional PHC staff to run the PHC.

Strong links remained with the hospital ART clinic that continued to lend a hand for another two years.

*The graph on the wall tracks the number of patients on ART at the outreach clinic. The clinic grew much faster than expected. (photo by Dr Stuve, Helderberg Hospital ARV clinic 2005)*
The ART Outreach clinic in the primary care facility grew so fast that more space was urgently required. NGO Absolute Return for Kids provided dedicated space for the ART clinic.
The outcome

Within a few months of ART being offered at the PHC, there was a notable improvement in the burden of illness at the clinic. Word got around and people came to the CHC requesting ARVs. Stigma in the clinic and the community was noticeably reduced.

Monthly initiations for the sub-district increased and the CHC ARV clinic became the fastest growing clinic in the sub-district.

“This is not the same clinic anymore. There used to be sick patients on the floor, on the benches and lined up on trolleys, waiting to go the hospital. Patients were too sick to get to the ART clinic, even though the hospital wasn’t very far.”

A nurse at the CHC after the outreach ART service started

Reference:
Dr Michèle Youngleson HIV/AIDS Improvement Project Eastern sub-District unpublished

Contact:
Dr Katrin Stuve, Helderberg Hospital – 021 850 4700, katmak@mweb.co.za
Nurse-led ART initiation in primary care in an urban sub-district

Nurse led, doctor supported initiation proves successful across an entire sub-district

One of the prerequisites for this model to work is training and tight control and supervision.

The problem

The total number of new patients in the three existing ART clinics in Khayelitsha sub-district was not increasing because enrolment capacity had reached saturation. (2611 new patients enrolled in 2007 compared with 2717 in 2005, short of the NSP target).

The cumulative patient load was increasing dramatically and staff/patient ratios were lowering resulting in:

- Overcrowding
- Longer waiting times during visits
- Less time for “irregular” patient counselling
- Higher losses to follow up (LTF)
- Less time for tracing patients lost to follow up
- Staff burn out
- More chaotic conditions for staff and patients

The change

The change was to start nurse based ART services in even the most remote facilities in the sub-district to reduce geographic barriers to accessing ART. This would reduce travelling time and related expenses but also serve areas that attract new arrivals from rural areas and encourage earlier access to treatment.

Decanting patients from existing ART initiation sites to the clinics closer to their homes was never very popular on the patient’s side and many refused to be down referred.

On the “receiving end”, nurses were happier to take responsibility for patients initiated by themselves than to take over patients transferred from other sites.

On-site patient initiation in the new PHC sites rapidly became the preferred option.
Training, mentoring and supervision

Training and mentoring are co-ordinated at sub-district level. The NGO Médecins Sans Frontières organises quarterly training for nurses on clinical management of HIV and TB, including ART. The training links theory to practical experience and the majority of the lecturers are doctors and nurses working in Khayelitsha. Experienced clinicians continue to mentor nurses in their clinical care after the course and the sub-district team spirit is fostered in the process.

*Mentoring is part of the clinician’s job description and essential to support nurse-based services.*

In large sites, doctor and nurses’ rooms alternate and rooms have connecting doors to facilitate ongoing communication during consultations. Medical meetings with case discussions, expert presentations, and policy reviews are held every two weeks at facility level.

*During the first few months of integration of ART in a new clinic, an experienced nurse is added to the existing staff to mentor and help with the implementation of the new programme.*

A safety net is provided through on-going links with referral points via telephone, regular visits from doctor-based roving teams and joint training.

Paediatrics

*Children and adults are managed by the same clinicians in primary care, with nurses doing routine follow-up and referring complicated cases to doctors.*

Tertiary hospitals provide telephonic and weekly on-site support to capacitate primary care doctors and nurses in the management of children on ART. Paediatric patients are seen on specific weekdays and at some clinics a paediatric team has been formed with a counsellor, nurse and doctor who have a special interest in children.

Task-shifting of paediatric ART was simplified by the use of pills rather than syrup formulations, weight-based drug dosing charts, and integration of adult and paediatric care at primary level with mentoring and support of nurses by doctors, and doctors by paediatricians.

Nurse-led doctor supported ART care at PHC level

*Acceptance of this major new responsibility by the clinic team was dependent on a number of essential conditions being met (see 10 points in the box below).*

Amongst them, the flagging of difficult cases (such as patients with low CD4, advanced TB/HIV disease, immune reconstitution syndrome, and central nervous system involvement) and effective referral to secondary care where needed is essential.

*The management of difficult cases is supported by the mobile clinic team at the PHC.*
Monitoring and evaluation

The NSP target for monthly ART initiation is individually calculated for each ART site based on the population served by each clinic. The sub-district manager leads a monthly data meeting for all ART clinics to review performance. Any failure to reach the monthly initiation target is discussed, reasons are identified and changes made. Quality indicators are also reviewed.

The venue for the monthly meeting rotates between clinics giving each an opportunity to include all cadres of healthcare workers.

The outcome

Khayelitsha reached the highest decentralisation in the Western Cape province with all clinics providing ART initiation. By the end of 2009, 13,500 ART patients remained in care and new enrolments continued to increase despite the scarcity of staff.

The graph shows the saturation of initial existing ART points in which enrolments reached a plateau around 250 initiations/month from the end of 2006. The new clinics allowed the growth in monthly sub-district initiations towards the NSP target (350/month).

Decentralisation allowed ART initiation in PHCs which deliver TB treatment making TB-HIV integration a reality.

(See Double Trouble: HIV and TB in Section 5)

Long-term outcomes are good, with 70% remaining in care and less than 15% with virological failure at 5 years on ART, a decrease in patients presenting with low CD4 counts, and decreasing mortality on ART. Retention in care for children was better than for adults at 87% at 5 years on ART.

10 Points for successful implementation of nurse-led doctor supported ART services at PHC level

1. Redefine roles and responsibilities within each facility based on task shifting/sharing
2. Appropriate staffing (professional nurse, counsellors, pharmacist assistant & admin staff)
3. Functional space, equipped consultation rooms
4. Supply lines (drugs, lab management tools) guaranteed
5. Large scale clinical trainings and clinical mentorship (doctor supported roving teams)
6. On going referral possibility and/or telephonic doctor supported and ‘red flag’ conditions requiring referral
7. TB/HIV integration and universal TB infection control
8. Quantitative and qualitative facility based NSP targets
9. Quality control and supportive supervision
10. Community involvement in patient supported activities
Spread

The City of Cape Town now has numerous nurse led doctor supported PHC initiation sites in all sub-districts across Cape Town.

References:
1. "Providing HIV/TB Care At The Primary Health Care Level Khayelitsha Annual Activity Report 2008-2009" Médecins Sans Frontières, Western Cape Province Department of Health, City of Cape Town Department of Health, University of Cape Town, Centre for Infectious Diseases Epidemiology and Research.
2. Virginia Azevedo, sub-district manager, Khayelitsha, Cape Town City Health Treatment Action Campaign (TAC) – personal communications

Contact:
Médecins Sans Frontières – 021 364 5490, msfocb-khayelitsha@brussels.msf.org, www.msf.org.za
Single initiation visits to distant ART sites

A whole systems approach to increasing access to ART in a resource constrained rural setting

The problem

Mhlontlo is an impoverished rural sub-district in Eastern Cape Province with a population of 220,000 and an antenatal HIV prevalence of 21%. An estimated 1,603 adults and 114 children need HAART initiation each year.

By early 2005, only four of 28 healthcare sites provided preparation for ART initiation, initiation on ART and chronic ART care. These sites were located at one geographic margin of the sub-district, making them poorly accessible to large numbers in the catchment population. 22 of the 24 remaining sites only provided HIV testing and there was a large backlog of patients waiting for ART preparation and initiation at the central sites.

*Patients had to make multiple, long-distance visits for ART preparation and maintenance.*

At the heart of the system’s inability to meet its treatment goals was the limited utilization of Mhlontlo’s robust network of primary care clinics and district hospitals for HIV care and ART rollout.

The change

An improvement project using a Breakthrough Series Model was used to engage all facilities in a Learning Network to tackle the sub-district challenges of providing...
equitable access to HIV/AIDS care (see *The Breakthrough Series – a systems improvement model for rapidly accelerating access to ART* in Section 5). Participants were supported to use improvement methods to strengthen systems of care. The following improvements accelerated access to ART in the sub-district:

i) The efficiency of pre-ART processes at the four existing initiation sites was improved to decrease the backlog of patients waiting for initiation.

ii) The number of initiation sites was increased when three additional healthcare sites were accredited by the National Department of Health.

iii) Primary health facilities increased their scope of work from HIV testing alone to include assessment of HIV positive patients (CD4 and staging), preparation for ART and post-initiation chronic care of patients on ART.

iv) Innovative ways to improve dispensing were developed by frontline staff. Instead of patients traveling to the few ART sites for monthly clinical visits and to fill monthly ARV prescriptions, each primary health clinic assigned a staff member as a courier to collect their patients’ medications from the initiation site once a month so patients could collect ART at their local PHC site.

Peer-to-peer sharing enhanced learning, sharing of ideas and realization that HIV services could be provided using limited resources.

**PHC coordination of medication delivery from outlying ART sites to close to home PHC sites increased access for patients on ART.**

This also allowed a major shift of the chronic care workload from a few overloaded sites back to the PHCs.

v) Data was actively engaged with at facility level and used to monitor progress and drive improvement. Two new registers were introduced.

The graph shows the number of clinics participating in the four elements of ART care (testing, preparation, initiation, and chronic care) increased rapidly over time.
UMHLONTLO’s district wide model for ART initiation:

- patients are fully prepared for ART at their local primary care site (PHC)
- they attend the distant ART initiation site ONLY ONCE for initiation (unless there are clinical complications)
- stabilization on ART and chronic care take place back at the PHC

Results

ART initiations increased from an average of nine a month in the six months before the improvement project (September 2004 – February 2005) to 52 per month in the last six months of the project.

The cumulative number of patients on ART increased from 81 at the start of the improvement project in 2005 to more than 1400 by December 2007.

The monthly Learning Network improvement meetings were an encouragement for clinics to increase their participation in the HIV/ART program. Through report-outs and feedback at these meetings nurses were able to observe that peers could provide these services with the resources at hand.

In cases where obstacles to good care were identified, participants quickly generated or shared new ideas for testing. Meetings also provided an opportunity to present critical resource needs to the sub-district office managers who had become active participants in the meetings.

References:
1. Cathryn E. Green, MBA (Institute for Healthcare Improvement, Cambridge, MA) et al, Increased Access to Highly Active Antiretroviral Therapy (HAART) in a Rural Health District of South Africa Through Inclusion of Primary Care Sites and Application of Systems Improvement Methods (unpublished report)

Contact:
Regional Training Centre (RTC) – 047 502 2171
Providing ART in primary care clinics brings ART closer to patients’ homes and reduces geographical barriers to care.
Nurse-driven ART care in rural Lesotho

Nurse initiation of ART makes ART widely accessible in rural Lesotho

The problem

Lesotho has the third highest HIV prevalence (23.2% among adults aged 15 to 49) and the fourth highest TB incidence in the world (635 per 100,000 people per year). HIV/AIDS accounts for at least 60% of all deaths in the country and 56% of deaths in children. Life expectancy has decreased and over the past two decades population growth has been negative.

There are just five doctors and 62 nurses per 100,000 inhabitants compared with 74 doctors and 393 nurses per 100,000 inhabitants South Africa.

In the pilot study catchment area in rural Lesotho there was no ART at all.

The aim

The aim was to start nurse-initiated ART in all health centers in a catchment area that had one 102-bed hospital and 14 rural health centers, each staffed only by nurses.

The change

The idea was that ART should be decentralised to be closer to people’s homes and that it would be free-of-charge.

Task shifting would make full use of limited resources by enabling all levels of nurses to diagnose, prescribe and dispense ART.

Programme approach

Background

Clinics are staffed by just one or two nurses (often nursing assistants with just two years of training) who provide a full range of primary care services and have a very high workload (45 consultations per nurse per day compared with 30 per day recommended by the World Health Organisation (WHO).

Clinics are supported weekly or fortnightly by a doctor or experienced nurse clinician who provides clinical mentorship and manages complicated cases as well as providing support for general clinic management including monitoring and evaluation.
Training

Nurses received intensive theoretical and practical training on the management of HIV related conditions and ART and specific training was provided to address weaknesses identified through evaluations.

In-service support and supervisory visits were conducted routinely.

Clinical Support Tools

Clinical support tools included a nurse-orientated guideline for HIV management. Standardized protocols and flow charts for basic clinical procedures and an algorithm for the diagnosis of smear negative TB were also developed.

A simplified cohort-monitoring tool was developed to produce quarterly outcomes on a limited group of indicators. Through this, nurses received feedback about their services so they could make improvements to enhance quality of care.

Additional Human Resources

Clinic-based lay counsellors were trained and received a stipend. They were often people living openly with HIV. Their tasks included managing HIV testing and counselling services, administering HIV rapid tests, pre-ART preparatory counselling, providing ART and TB treatment adherence support, providing general clinic support, tracking patients who are eligible for ART but have not yet been started, and organising ART and TB defaulter tracing (for more detail see Task shifting – sharing the workload with lay healthworkers in Section 6).

Additional resources

Many resources were added to strengthen all parts of the healthcare system:

- The hospital laboratory received additional equipment, technical and management training, and human resources.

- A mobile specimen collection system allowed blood specimens to be taken at the peripheral clinics so patients no longer had to go to the hospital for laboratory investigations and the turn-around time for results was improved.

- Drug supply and management were improved through training and supervision, structural improvements to increase storage capacity, and additional human resources at the hospital pharmacy.

- Substantial infrastructure improvements were made to accommodate the increased volume of patients, improve patient flow and clinic organisation, and address the very poor working conditions for health staff.

- Audits and discussions with staff helped to identify priorities that included:
  - providing essential equipment (such as stethoscopes, thermometers and syringes)
  - improving organisational capacity with basic furniture and supplies (such as additional benches, cabinets and patient files and folders)
improving conditions (for example, by upgrading radios and providing coal and other materials for heating during winter months)

improving infection control and occupational health practices

Programme management and M&E were strengthened through mobile medical teams.

Clinical and management support

Supervisory visits are conducted routinely and a quarterly TB/HIV clinic supervision tool, that looks at process and outcome data, is used to assess care and drive improvement.

_HIV services were provided for health workers because HIV-related death is the greatest cause of healthcare worker attrition in the country._

(see Caring for the Carers in Section 6)

Outcomes

Working conditions for staff were improved through substantial structural improvements.

In just over 3 years, 13,243 people were enrolled in HIV care (5% children) and 5,376 initiated on ART (6.5% children), 80% of these at primary care level. ART initiation increased substantially each year, and the proportion of sick adults, with a CD4 count of less than 50 cells/µl, halved (from 22.2% in 2006 to 11.9% in two years), as people were able to access treatment earlier. 80% of patients were still receiving ART at 12 months, and 76.5% at 24 months.

The integration of comprehensive HIV/AIDS services into the primary healthcare package enabled the healthcare system to better address mortality among adults and children.

_The entire primary healthcare system in the catchment area benefited from inputs to strengthen HIV services._

References:


A roving team of doctor and pharmacist supports a number of outreach sites. Medication can be carried in bulk and dispensed on-site at the primary care clinic.
Cascading ART through a rural sub-district in KwaZulu-Natal

Extending ART across a rural sub-district through stepwise development of PHCs as feeder sites to chronic ART management and initiation sites

“Regardless of the province, primary level ART is the key to sustainability. ART initiation in primary care significantly increases retention in care, decreases mortality and increases Viral Load suppression probably due to improved access”

Ashraf Grimwood, CEO, Kheth’Impilo

The challenge

The challenge was to establish ART management and initiation in all primary care facilities in Amajuba, a rural district in northeast KwaZulu-Natal.

The model

Amajuba is a rural district in KwaZulu-Natal. The first initiation site was developed at the tertiary level in Madadeni Hospital, which served as the hub for primary level clinics in the surrounding district. PHC feeder sites worked up patients, referred them to the hospital for ART initiation and managed chronic stable patients on ART when they were down referred after about a year of attending the initiation site. Prescriptions were filled and pre-packed by the tertiary hospital and delivered to the PHC sites for dispensing. PHC sites in which the cohort of chronic care patients increased to approximately 500 patients, were converted to initiation sites and supported by a roving team of doctors and pharmacists. Medication could now be carried in bulk by the roving team and dispensed on-site at the PHC. Feeder clinics refer to the closest initiation site, so as more PHCs begin initiating ART, ART initiation and early chronic care are brought closer and closer to patients’ homes facilitating access and improving adherence as patient advocates from the PHC were better able to support patients. (See Community Based ART Adherence Support in Section 5)

This model supports the stepwise development of PHCs from feeder clinics to chronic ART management sites and finally ART initiation sites, cascading expertise and care throughout the sub-districts.
The model of roving teams allows scarce expert skills to be highly leveraged and maintains support and coherence of the whole referral system (see Roving Teams in this section).

Challenges of readiness for PHC initiation

The lack of personnel categories and pharmacy support as well as infrastructural constraints created a challenge to preparing PHCs for ART management and initiation. NGO partner, Kheth’Impilo (KI), provided PHCs with a pre-fabricated park home if needed and employed staff at identified critical posts.

There are currently 11 initiation sites managed by three pharmacists who dispense to patients at all these sites. Further site readiness is limited by the pharmacists’ capacity. To expand access to more PHCs, despite a shortage of pharmacists, KI introduced the concept of post-basic pharmacist assistants who, after two years of training, are able to dispense under remote supervision at PHCs. Post basic pharmacy assistants (PBPA) are being trained to support PHC ART initiation sites as cohorts reach > 500 patients on ART. Funds have been obtained and five PBPAs are currently being trained and another five PBPA posts have been advertised by the DoH. This will ensure that 10 sites will have an in-house PBPA overseen by the three pharmacists. Pharmacists will train and support all 10 PBPAs as well as expand dispensing to the rest of the PHCs, totaling 18. (See An Innovative Model for Training Post basic Pharmacy Assistants in Rural KwaZulu-Natal in Section 6)

Results

Second tier initiation sites act as sub-hubs bringing ART initiation closer to patient’s homes.

Trained staff supported by roving teams of doctors, nurses and pharmacists with adequate infrastructure and monitoring systems at these intermediary sites are increasing access to ART in the sub-district.

The graph shows the increase in monthly initiations over time

Reference:
Dr Ashraf Grimwood Kheth’Impilo (personal communication)

Contact:
Decentralising paediatric ART to primary care

Support from tertiary sites brings paediatric ART closer to where children live

The problem

At the start of the ART roll out, there were many obstacles to children accessing ART in Cape Town.

*Paediatric ART was only available in tertiary care hospitals far from patients’ houses.*

Centralised hospital care was not convenient for the patient. Transport was expensive and the visits were time-consuming. This had a negative impact on access and adherence.

Children were also often referred very late because clinic staff did not feel comfortable staging children and taking blood for CD4 assessment.

*Many HIV positive infants and children were lost to follow up after diagnosis and before referral for ART.*

Even though there was general agreement that children would do better if they could access care closer to home, lower level facilities were reluctant to take on paediatric ART initiation and management for a number of reasons:

- Guidelines and treatment schedules were not simple
- Pharmacy management of paediatric drugs required a separate system with additional space and equipment requirements
- Dispensing was more complicated and time consuming
- Consultations were more complicated because communication needed to happen through the care giver
- HIV disease in children often progressed rapidly and children presented ill
- Staff lacked confidence and skills and felt their hands were already full managing adult patients on ART

The aim

The tertiary hospital wanted to ensure that children could access good ART care in local clinics close to where they live. The aim was to reduce barriers and ensure staff felt supported and able to provide ART care at secondary and primary levels.
The change

An outreach clinician from the tertiary hospital routinely went to ART clinics in secondary and primary referral sites to provide paediatric ART and capacitate local ART staff to manage and treat children.

Changes had to be made at many points of the system:

- The provincial government strongly supported the decentralisation of paediatric HIV care
- The tertiary hospital was capacitated with an extra doctor’s post to support the outreach
- Referral criteria were made more flexible, so on diagnosis of HIV infection, children could be referred directly to the ART clinic rather than being assessed and followed up at the primary care clinic
- Guidelines were simplified to take staff discomfort into account with clear weight to dosage tables
- The provincial department of health included paediatric training into the HIV curriculum from early on and had an active programme for training nurses and doctors in paediatric care

How it worked

The paediatrician from the tertiary hospital went to the referring ART site and identified what the needs were to equip them to take on paediatric ART. She visited the clinic monthly to treat the children on ART and was supported by the clinicians at the local ART site.

Paediatric ART management was introduced step-by-step starting with only a few stable patients on pills who were down referred from the tertiary site. As confidence increased and systems issues, such as adequate storage in pharmacy, were addressed, stable children on syrups were down referred and well children were initiated on-site. Nurses began to take on new functions such as drawing paediatric bloods. In time all but the very sick children were initiated and managed on-site.

As the number of children in care increased, the outreach doctor needed to visit more frequently, from monthly to fortnightly and then weekly. At this point, clinics had to take over the management of stable paediatric patients to share the load.

The on-going support and mentoring by the outreach doctor enabled local staff to develop competencies and confidence to take on paediatric ART management. Strong up referral systems maintained clinicians’ confidence and the tertiary care doctor was always available by phone and email to answer questions and give advice.
Results

By early 2010, most ART sites in the Cape Town Metro District were offering pediatric ART, either supported by one of the three tertiary hospitals or on their own.

A major barrier to sites becoming independent of outreach support is the high turnover of staff in the primary care, which results in the loss of skills and experience. Because patients were down referred and initiated in primary care the number of pediatric clients on ART at the tertiary hospitals stabilized, allowing them to focus on extremely ill patients who require specialist intervention. Tertiary sites have identified a role for themselves in supporting primary care clinics to implement protocol changes and to keep them up-to-date with the latest evidence based knowledge about pediatric HIV.

Other models

Other tertiary hospitals in Cape Town also provide outreach services some with multidisciplinary teams comprising doctor, nurse and pharmacist.

Reference:
Dr Helena Rabie, Tygerberg pediatric ART clinic (personal communication)

Contact:
Tygerberg Hospital Paediatric ART clinic – 021 938 4957
Section 4: Measurement and management tools

This section looks at interventions that support the HIV/AIDS programme through monitoring and evaluation.

We include an easy to use ‘HAART calculator’ that helps sub-districts set targets for individual facilities for each step of the HIV care pathway. Knowing what each clinic needs to achieve assists sub-districts to meet the overall NSP targets for ART initiation, helps identify gaps in care and guides the allocation of resources.

Monitoring and evaluation (M&E) systems are necessary for oversight of the programme to guide planning, prioritise development and support and monitor quality of care and outcomes. A successful province-wide paper-based monitoring and evaluation system for the ART programme is highlighted in this section.

Monitoring and Evaluation Tools can also assist with individual patient care. For instance, The Antenatal (ANC) PMTCT Data Tool helps identify programme weakness as well as gaps in individual patient care and the electronic monitoring tool iDART not only assists with pharmacy support but also generates lists of defaulters for follow up.

Good documentation of patient Information is essential to ensure the safety and effectiveness of care and good information transfer between different facilities is essential. Without this patients ‘fall through the cracks’. Opportunities for
intervention are missed resulting in morbidity and mortality and waste limited healthcare resources.

Examples of paper-based management tools include the *patient passport*, and the *patient folder and filing system*. 
Tools for setting facility targets for HIV care and ART initiation

Two simple calculators help districts set targets for each step of the HIV care pathway (HIV testing, CD4 testing, ART referral and initiation)

The problem

In order to reach the South African government’s National Strategic Plan (NSP) target of providing ART to 80% of those in need by 2011, districts need to know how many people need ART in their service area.

Once the need for ART is known, the NSP targets for ART initiation can be calculated.

Each facility contributes to the overall sub-district target for ART initiation, however, facilities often do not know what their contribution should be. Facility-specific targets for each step along the HIV care pathway – from HIV and CD4 testing, to referral for ART and ART initiation – are needed to assist facilities assess their performance and identify gaps in care.

The change

The change is to provide an easy-to-use tool to help districts estimate the need for HIV services at district, sub-district and facility level using readily available data.

The HAART Calculator and HAART Process Calculator

The HAART Calculator and the HAART Process Calculator (see next page) are simple web-based tools that use readily available data to calculate the annual/monthly need for:

- ART initiation at district and facility level
- HIV testing, CD4 assessment, referral for ART at district and facility level

The HAART Calculators can be downloaded from:

http://www.ihi.org/IHI/Topics/DevelopingCountries/SouthAfrica/EmergingContent/SouthAfricaHAARTCalculator

Partners:
Institute for Healthcare Improvement (IHI)
Reproductive Health and HIV Research Unit (RHRU)
Location:
Johannesburg, Gauteng
Mhlontlo sub-district, OR Tambo District, Eastern Cape
Funders:
Institute for Healthcare Improvement (IHI)
US President’s Emergency Plan for AIDS Relief (PEPFAR)
Step 1: Fill in the population size and ANC prevalence rate in the yellow zones.

Target: Annual and monthly target for ART initiations will automatically be calculated here.

This row gives the ANC prevalence rates for each province needed for Step 1.

Step 2: In the yellow zones, fill in the headcount of each facility as a percentage of the total headcount of the district/subdistrict.

Step 3: In this yellow zone fill in the percentage of patients who test HIV positive in the district/subdistrict.

Step 4: In the yellow zone, fill in the percentage of newly diagnosed HIV+ patients with CD4s < 200 (use data from 2009).

Targets: Targets for HIV testing, CD4 counts, referrals for ART and ART initiation for each facility will automatically calculate in the blue columns.

The HAART calculator and HAART process calculator:
http://www.ihi.org/IHI/Topics/DevelopingCountries/SouthAfrica/EmergingContent/SouthAfricaHAARTCalculator.htm

An easy way to work out individual facility targets for HIV testing, CD4 counts, referral for initiation and ART initiation.
1. **Estimating monthly need for ART initiation in the district**

*The HAART Calculator calculates the need for ART in a stable system.*

Recent changes in CD4 threshold for referral for ART will add about three times as many patients as typically need to start ART in one year. This new backlog of patients with a CD4 between 200 and 350 cells/dl will remain (but not increase) until there is enough capacity in the system to put all who need ART onto treatment. Once the backlog of additional patients caused by the change in guidelines has been cleared, the number of patients who need to start ART each year goes back to the steady state (see page 136).

The **HAART Calculator** is based on statistics from the Actuarial Society of South Africa (ASSA).²

**HAART Calculator** (see previous page)

**STEP 1**: The population size and antenatal HIV prevalence are entered into the HAART calculator to generate the annual and monthly need for new ART initiations.

2. **Estimating monthly need for ART at each facility**

Each health facility represents only a fraction of the district’s total need for ART. To obtain facility-specific targets the district target must be broken down into the correct proportions.³

District Health Information System (DHIS) reports monthly headcounts at each facility. These data can be used to calculate the proportion of the total number of patients in the district that attend each facility. These proportions can be applied to the district’s target for ART initiations to calculate a target for each facility assuming the HIV prevalence is uniform across the district.

**HAART Process Calculator** (see previous page)

**STEP 2**: The headcount of each facility as a proportion of the total headcount is entered into the HAART Process Calculator so the burden of HIV disease can be calculated for each facility.

3. **Estimating monthly targets for HIV and CD4 testing at district and facility level to meet the need for ART initiation**

*Patients using the healthcare system have a higher HIV prevalence rate than the general population.*

Two groups of HIV positive clients ‘concentrate’ in the healthcare system making the prevalence of HIV in the clinic population greater than in the general population.

- Pregnant women who have an HIV prevalence rate about twice that of the general population (they are sexually active and not practicing safe sex).
- Sick HIV positive clients (e.g. approximately 70% of TB patients are HIV positive).
Tried & Tested: Models for the scale up of HIV prevention, treatment and care from South Africa and beyond

**HAART Process Calculator** (see page 132)

**STEP 3:** The percentage of patients who test HIV positive across all facilities in the district is entered into the identified field.

*A high percentage of HIV positive patients using the healthcare system have low CD4 counts because sick patients use healthcare services.*

**HAART Process Calculator** (see page 132)

**STEP 4:** The percentage of newly diagnosed HIV+ patients with a low CD4 count is entered into the CD4 field. (To calculate the stable state use the percentage of CD4’s < 200 cells/µl from 2009).

*The HAART Process calculator calculates targets for each step in the care pathway – HIV counseling and testing and CD4 assessment – as well as the need for ART for each facility.*

---

**Example**

In the example below, the sub-district has a population of 360 000 and the antenatal HIV prevalence is 29%. These figures are entered into the HAART Calculator to estimate the NEED for ART at 3689/year or 307/month (see below). (At 80% of the need, the NSP target is 2944/year or 246/month).

In this example, there are 12 primary care clinics (PHCs) in the sub-district. The percentage of the total headcount each clinic contributes is known from the District Health Information Services (DHIS) data. The percentage of newly diagnosed patients with HIV with a CD4 count <200 cells/µl is 22%. The percentage of patients who test HIV positive across all clinics in the sub-district is 27%. This data is entered into the correct fields in the HAART Process Calculator to give targets for HIV counseling, CD4 assessment and ART initiation for each PHC (see below).
The biggest PHC (PHC8) in the example accounts for 15% of the sub-district headcount. The PHC is therefore accountable for 15% of the total sub-district need for ART, or 46 initiations/month (assuming the prevalence of HIV is uniform across all communities). The HAART Process Calculator shows that in order to meet this target, the PHC must test 776 clients for HIV every month. 210 (27%) of new clients tested are expected to be HIV positive. All 210 clients must have CD4 assessments of which 46 (22%) are expected to be < 200 cell/µl, indicating clients who need ART.

---

**Results**

This tool was developed and introduced in Mhlontlo sub-district, OR Tambo District in the Eastern Cape. Before introducing this tool in a paper-based form, most facilities operated far below the estimated number of clients needed to reach the ART initiation targets. Once facilities committed to reaching local testing and referral targets, they developed local strategies to provide voluntary counselling and testing (VCT) for every antenatal client and tuberculosis (TB) suspect. HIV testing in the Mhlontlo sub-district doubled from 1,500/month to over 3,000/month over a six-month period after these local VCT targets were introduced at district health facilities.

---

**References:**


**Contact:**

N Leydon – nleydon@ihi.org
The impact of the change of CD4 threshold on the demand for ART

The number of new patients who need ART initiation each year depends on the number of people infected with HIV in previous years – from the time of infection it will take approximately eight years to ART initiation if the CD4 count threshold is 200 cells/µl and six years if the threshold is 350 cells/µl. Moving from a cut off point for eligibility for ART from CD4 < 200 cells/µl to CD4 < 350 cells/µl for some high risk clients will significantly, but only temporarily, increase the demand for ART.

Once the backlog has been managed, the number of people qualifying for ART each year will again stabilise at the same rate as before.

<table>
<thead>
<tr>
<th>Year of infection</th>
<th># years of infection before HAART initiation (threshold CD4&lt;200 cells/dl)</th>
<th>Start HAART 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1 2 3 4 5 6 7</td>
<td>500k</td>
</tr>
<tr>
<td></td>
<td><img src="image1.png" alt="Diagram" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of infection</th>
<th># years of infection before HAART initiation (transition)</th>
<th>Start HAART 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1 2 3 4 5 6 7</td>
<td>500k</td>
</tr>
<tr>
<td></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>1 2 3 4 5 6 7</td>
<td>500k</td>
</tr>
<tr>
<td></td>
<td><img src="image3.png" alt="Diagram" /></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>1 2 3 4 5 6 7</td>
<td>500k</td>
</tr>
<tr>
<td></td>
<td><img src="image4.png" alt="Diagram" /></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year of infection</th>
<th># years of infection before HAART initiation (CD4&lt;350 cell/dl)</th>
<th>Start HAART 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1 2 3 4 5</td>
<td>500k</td>
</tr>
<tr>
<td></td>
<td><img src="image5.png" alt="Diagram" /></td>
<td></td>
</tr>
</tbody>
</table>

Reference:
Monitoring and evaluating the ART programme

Knowing how you are doing keeps the ART programme on track

The problem
The scale up of antiretroviral treatment requires a simple, easy-to-use, efficient and effective monitoring and evaluation system.

All sites need to know what the need for ART initiation is, how many patients are being initiated on ART and how well their patients on life long ART are doing.

Programme managers need data for planning and to identify which ART sites are most in need of support.

The change
A simple, easy-to-use, paper based register and standardized clinical stationery were implemented in the Western Cape (WC) at the start of the antiretroviral roll out in 2004, supported by a monitoring and evaluation coordinator at the provincial office.

It was a 'basics-first' approach to monitoring. A simple paper system meant monitoring could take effect immediately and help the facility staff understand and manage patient enrolment and clinical outcomes at the facility.

How it works
The paper-based register

The paper-based ART register works on a cohort system. Patients are entered into the register in the month of initiation on ART.

A 'cohort' is a group of people with a common characteristic. In the ART register the common characteristic is the month in which ART was initiated. This makes it possible to track groups of patients as their treatment progresses over time.

The registers are longitudinal – data from the follow up visits are entered alongside the first entry at ART initiation and entries for each patient progress along the same row over time.

Registers can capture 36 months duration of treatment before the patient is transferred to a follow-on register.

Partners:
Provincial Government of the WC
ANOVA
Right to Care
Kheth‘Impilo

Location:
81 service points province wide in the Western Cape

Partners:
Department of Health Western Cape
US President’s Emergency Plan for AIDS Relief (PEPFAR)

Two tools to monitor the programme:
→ Standardized stationery for the management of all patients in HIV care and on ART throughout the province.
→ Paper registers for collecting enrolment and retention in care data longitudinally.
Data capturers

Facility-based data capturers have been hired to support the ART services within facilities and to manage data capturing and reporting. They are trained to carry out a number of tasks:

- Data capturers triage blood results as soon as they arrive at the clinic.
  - Stable results are filed in the patient’s folder
  - Results that need to be brought to the doctor’s or nurse’s attention, such as unsuppressed viral loads and low CD4 results, are kept aside.

- At the end of the visit, after medication has been picked up at the pharmacy, the patient’s folder goes to the facility-based data capture. The data capturer enters the clinic visit information into the paper-based ART register before the folder is filed away.

- Data capturers generate monthly and quarterly facility reports from the paper-based ART register by collating the data and send it to the provincial office.

Standardised ART stationery

Standardized ART stationery works as a ‘checklist’ to prompt clinicians about the interventions required at each patient visit.

*Because clinical information is recorded in standardized fields in the stationery it is easy for data capturers to find the information and link it into the paper-based ART register.*

Collating data, analysis and reporting

Data is collated at each site by the data capturer and submitted to the HIV Treatment Monitoring and Evaluation Coordinator in the WC provincial office. Monthly data from 81 sites is entered into a central database from where data for the whole province it is collated and reported.

The number of new adults and children initiating on ART and the total adults and children in care by site and for the whole province are reported monthly and are distributed by email list-serve to all facilities, programme managers and key role players within the ART services province-wide.

Quarterly data is limited to treatment naïve patients who are new on ART and looks at baseline information, treatment response and clinical outcomes after a specified duration on ART (3, 6, 12, 18, 24, 30 and 36 months). Quarterly data is fed back at six-monthly district meetings and quarterly trainings.

Annual data is reported in a programme specific report, fed back to programme and clinical managers and included as an appendix to the Division’s Annual Report.

The monthly enrolment data is used for budgeting for the ART programme, for prioritizing the establishment of additional ART facilities, for facility based planning and resource distribution.
Clinical data generated from the quarterly reports is used for assessing retention in care, loss to follow up and death. This is used for programme management and for assessing the quality of care.

<table>
<thead>
<tr>
<th>Monthly data</th>
<th>Quarterly data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients initiated on ART (Adults and Children)</td>
<td>Demographics of new patients initiating ART (gender breakdown of adult patients)</td>
</tr>
<tr>
<td>Total patients remaining in care (Adults and Children)</td>
<td>Measurement of advanced immune suppression (adults CD4 &lt; 50 cells/ μl, children a CD4 percentage &lt; 15% total lymphocytes) at ART start</td>
</tr>
</tbody>
</table>

Results

This simplified ‘basics-first’ paper-based monitoring system has supported the expansion of antiretroviral services in the Western Cape. The monitoring system has been easily implemented increasing from 16 sites in 2004 to 81 sites at the end of March 2010, enabling complete retention in care data and relatively complete clinical outcome data to be easily generated to support programme managers and clinical staff.

The M&E system focusing on ‘basics first’ has enabled the Western Cape to reliably and routinely capture all clients started on ART in the public sector and reliably report on retention in care and clinical outcomes for these clients over time. The Western Cape is the only province able to report retention in care of patients on ART. Because of this, outcomes from the WC province serve as proxy data for South Africa in United Nations General Assembly Special Session (UNGASS) reporting.

By February 2010, the Western Cape had enrolled 86,007 patients onto treatment since the start of the roll out (79,264 adults and 6,743 children) and had 72,767 patients remaining in care (67,213 adults and 5,554 children).

Challenges

Challenges with the paper-based system relate to programme growth and expansion. As the programme expands, the ever-growing number of patients makes it difficult to capture information, find patients within the register, manage the movement of patients and to collate the monthly and quarterly reports for 72,767 patients. In some facilities 3,000+ patients are managed using the paper based register. An electronic patient management system would support data capture
and generate reports. A monitoring system which generates defaulter lists would support patient retention in care.

The monitoring system allows the province to track new enrolments over time. The graph shows the steady increase in monthly initiations on ART since the start of the role out in 2004 for adults and children. The periodic dips in initiations occur predictably over the December holidays.

Data from the M&E programme can be used to assess the impact of services and compare sites.

The graph shows that the proportion of patients starting ART with CD4 < 50 has gone down measurably from 2001 to 2009.
Section 4: MEASUREMENT AND MANAGEMENT TOOLS – Monitoring and evaluating the ART programme

Spread of the change

The success of the Western Cape’s ART Monitoring and Evaluation programme has been welcomed by the National Department of Health and a modified version will be implemented nationally as antiretroviral services expand to primary healthcare sites in response to the Presidential announcement of December 1, 2009.

References:

Contact:
Catherine White, HIV Treatment Monitoring and Evaluation Coordinator, Provincial Government of the Western Cape – 021 483 9323

This graph compares facilities and the proportion of patients starting ART with a CD4 <50 cells/µl.

The dotted lines define the average CD4 count at ART initiation at each of the sites. Dots above or below the dotted lines show each clinic in relation to the average. The ‘whiskers’ show the effect of sample size. If the whiskers touch the ‘average’ lines the clinic cannot be said to be different from average.

This comparison enables us to assess the burden at individual facilities. For instance, with D.P. Marais the blue dot cannot be seen, showing a high proportion of patients start with CD4 <50 cells/µl. This is expected as it is a TB hospital. Conversely, Nyanga CHC has a small proportion of patient starting ART with a CD4 <50 cells/µl showing patients are less ill when they start ART.
An antenatal PMTCT data tool

Closing the gaps in antenatal PMTCT to get eligible pregnant women on to Life Long ART

The problem

Despite the availability of dual therapy, Mother-to-Child transmission of HIV in Senqu sub-district, Ukhahlamba District in the Eastern Cape Province was very high (16%). Many mothers who needed HAART did not access it.

Gaps in antenatal PMTCT resulted in high MTCT rates.

The ANC register had many incomplete PMTCT data fields because PMTCT data were kept in multiple registers and ANC staff had no way of knowing where the gaps were.

PMTCT data were kept in multiple registers

The change

Clinic supervisors developed an Antenatal PMTCT Data Tool for structuring monthly assessments of antenatal PMTCT.

The data tool tracks every step of the antenatal PMTCT care pathway from gestational age at booking through HIV testing, CD4 assessment to dual therapy and HAART.

The tool is used to collate PMTCT data for all pregnant clients entered into the Antenatal Register in the month under review. Only data entered into the Antenatal Register is collated. Data missing from the register can be entered into the register during the supervisory visit so it can also be collated. This ensures completion of data into the register and also identifies where the gaps are in care.
The monthly review is done at each clinic with a multidisciplinary team including a nurse, counsellor and facility manager from that clinic.

Data are now ‘forced’ through the ANC register onto the ANC PMTCT Data Tool.

The Antenatal PMTCT Data Tool follows the patient through each step of care so it’s easy to see what’s going on. Gaps can be easily identified and if steps have been missed, patients can be recalled.

Example of how the Data Tool assists to identify gaps in care:
In the example above from Robert Mjobo clinic, the red box highlights the data entry for June 2009. All data is taken from the antenatal (ANC) register. In June, there were 14 new antenatal clients in the ANC register. All were counselled and tested for HIV. Four patients were HIV positive and all had a CD4 count done. Three had a CD4 count > 200 cells/μl and one patient had a CD4 count < 200 cells/μl making her eligible for Life Long ART. Three patients started ANC AZT but the patient who needed Life Long ART had not been referred. This patient can now be urgently recalled.

Results

The tool has given the clinic supervisors a structured way of assessing antenatal PMTCT.

By using the tool, antenatal staff has developed a better understanding of the PMTCT care pathway and are able to identifying their strengths and weaknesses.

Many GAPS in CARE have been identified allowing improvements to be tested including:

- Poor understanding of the urgency for Life Long ART was identified and corrected
- Missing CD4 results are identified and traced during the data meeting
- Women with low CD4 counts not yet on Life Long ART are identified and plans made for recall
- Problems with the lab are identified and plans made for improvement

*Because all PMTCT data is now channeled through the Antenatal Register, the registers are being kept up to date which improves patient management.*

The graphs above show the number of PMTCT mothers initiating and delivering on Life Long ART is increasing.
Sustainability

- **A benchmark best practice idea was used** - a cohort data tool linked to a register was an idea that came from the Western Cape where it works very well

- **Local solution to a local problem** – the PMTCT Data Tool was designed with the clinic supervisors to meet a need in this sub-district

- **Ownership of process** – the clinic supervisors helped to design and perfect the tool as they tested it in the clinics

- **Routine data review** – the tool is used to collate ANC PMTCT data monthly

- **Ownership of the data**
  - The ANC PMTCT data is collated with team support and everyone can see where it comes from
  - The PMTCT Cohort Data Tool makes sense of how the clinic is doing every step of the way
  - All data belongs to a particular patient so the numerator always matches the denominator

- **Data is used to drive change** – the process is meaningful

- **Sustained leadership attention** – the district HIV manager expects every clinic to update the data template and submit it to her every month

---

**Reference:**
Dr Michéle Youngleson, Institute for Healthcare Improvement A-Plan Case Studies Senqu November 2009

**Contact:**
Farzaneh Behroozi – farzaneh.behroozi@gmail.com
UPDATE ONLY THE MOST RECENT THREE MONTHS

<table>
<thead>
<tr>
<th>MONTH</th>
<th>Total ANC Clients (New + F/F in)</th>
<th>Gestation at booking</th>
<th>HIV Status</th>
<th>FOR HIV+ CLIENTS ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Known on HAART CD4 not necessary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt; 20 wks</td>
<td>&gt; = 20 wks</td>
<td>POS</td>
</tr>
<tr>
<td>JAN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>APR</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JUN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JUL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AUG</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DEC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Tools for ‘wellness’ and ART care in rural Limpopo

Support groups, patient held records and monitoring registers help to retain HIV+ patients in care in rural Limpopo

The context

Limpopo is South Africa’s second poorest province. It is largely rural and the majority of people live either in traditional villages or informal settlements. Subsistence farming and seasonal work in the agriculture sector is the norm. Poverty is a major problem with unemployment estimated at 67%. Mopani District is one of Limpopo’s five districts with a population of 1.2 million people. The HIV antenatal prevalence rate in Mopani is 25%.

In 2004 there was little HIV care and no ART in the district, but by December 2009, all 99 clinics had active “Wellness” programmes for management of people living with HIV and ART was available in 7 hospitals and 13 PHCs (6 down-referral for chronic management and 7 fully accredited sites). ART in the PHC facilities in this rural district is largely nurse-led and doctor supported.

Support Groups and Management Tools were developed to support and monitor HIV positive clients through all the steps in care and to retain them in care.

Future ART clinic Mopani
Support groups

The key to the successful increase in ART management across the district is monthly client support groups that empower clients to actively manage their own health and wellness. Support group members are both clients on ART and newly diagnosed HIV positive clients, the former sharing knowledge and experience with the newcomers. Lay counsellors at the clinics learn how to start up and facilitate support groups through the assistance and support of an NGO partner Khutšo Kurhula (KK). Once established, support group members who show a keen interest in leading a group are then offered a two-day training course to enable them to run their own support groups on a voluntary basis without PHC staff input. The training course was developed by KK. KK also offers on-going on-site mentoring and supervision to assist members to run their monthly groups.

“I was able to attend a support group session. I found the experience wonderful. I was surprised at how deep the talking was. It showed me that people accept who they are in a positive way. They were speaking openly, not ashamed, caring for each other – both men and women. The message was that having AIDS is not a death sentence; here (in the support group) you will learn to cope.”

KK Administrator assistant

Here support group members discuss female condoms
The health passport

As the district began scaling up HIV services, a patient held record, the Health Passport was developed to facilitate care delivery by empowering patients to manage their own health. The Health Passport is a small booklet issued to clients who choose to accept it, which they keep in their possession and are trained to use. There are separate Health Passports for children, men and women (the latter with a section on PMTCT).

The Health Passport tracks care from wellness to ART. Essential information such as the names of client’s medication, allergies, weight, the results of CD4 counts and viral load tests, and disease progression is noted in the passport. Monthly weight and screening for STI and TB, as well as contraceptive methods are recorded.

The health passport also contains information on the steps to take when you are HIV positive, pregnant or have symptoms of TB.

---

Results

Approximately 20,000 Health Passports have been issued in Mopani. 90 patients were interviewed to assess the effectiveness of the passports. In this group, use of the passport was assessed to be “fair to good”. 90% had follow-up care notes recorded in the last 3 months. 45% of ART clients who had received passports at their local clinic reported using them at their hospital ART site and 64% who had received passports at the hospital ART site reported using them at their local clinic. Unfortunately, healthcare workers need ongoing motivation to record in the passports and patients are encouraged to be the motivators. Additional patient education and motivation is needed to increase effective use of the passports.

“I encourage you to carry your passport always. I visited Johannesburg one time and my tablets got finished. I went to the clinic and produced my passport and immediately I was helped because the treatment that I’m taking is written in the passport, so this passport is a life saver, use it.”

The passport is the size of an ID book, it contains 18 pages with information and checklists (3 in local African languages), and 35 pages for follow-up notes. The booklet is very simply printed by a local printer for the prize of R7 each.
Registers and recall

Longitudinal monitoring registers make it simple to follow up clients attending ART sites in rural Limpopo

HIV and ART registers

Paper-based clinic registers form an essential part of wellness and ART care in rural Limpopo. The registers combine two essential roles - clinical follow up and the provision of statistical information to the DOH and funders.

Each PHC has a ‘Wellness Register’ in which nurses record details of visits and care for analysis and the follow-up of clients. This helps staff to detect and manage potential problems early, for example, clients who have missed a follow up CD4 assessment. Likewise, all ART sites in Limpopo (hospitals and clinics) have implemented a paper-based ART register in which clients are entered at initiation onto ART (or transfer in from another facility). Clinic and treatment collection visits are noted in the register, as well as CD4/VL, pregnancy and TB.

How the register works

The innovative and crucial feature of the register is that it is longitudinal following patients over time.

A client’s name and file-number are entered only once (at entry-point) and from then on that row is used for information on this client for two consecutive years.

Every month at treatment collection date, a mark is entered in the correct month column. After two years, the client is re-entered in a continuation register. In this way, it is easy to get a quick monthly overview of the names of clients who have not collected treatment. On the same row in the register, the 6-monthly VL/CD4 counts are entered as well as information on pregnancy and TB. It gives an easy overview of clients whose VLs are not well suppressed, and of TB and pregnant clients.

Teething problems

This change in client registration was new for healthcare workers who were used to daily registers that were not suitable for long-term client follow up.

Intensive support, persuasion and training were needed before everyone understood and correctly used the registers. The success of Xihlovo clinic helped (see the graph on the next page) and currently the Limpopo Department of Health and Social Development has introduced the register in all sites.

Tracing and recall system for ART patients

The ART clinical team regularly checks the ART register for patients who failed to collect their medication. These patients are actively traced by phone or through feeder clinics and community healthcare workers and are encouraged to return. Patients are defined as ‘lost to follow up’ if they have not collected treatment for three months and cannot be traced.
Results

In 2 years, 1,355 patients were enrolled on ART at Xihlovo clinic, a nurse-led, doctor supported ART clinic in a rural PHC in Limpopo. On average, 10 patients a month (1% of those on active treatment) are successfully recalled. At the end of the 2 years, 87% of patients were on active treatment, 9.7% had died, 2% had transferred out and only 1.6% were lost to follow up, showing a low treatment defaulter rate is possible through active registration, counselling and monthly tracing of patients who did not show up for treatment collection.

The Longitudinal ART register tracks the patient’s progress over time.

The graph shows how data from the longitudinal register can be used to track programme outcomes.
Patient files

Improved organisation of clinical notes was needed to maximize chronic management of HIV positive clients

The problem

Historically, at Public Health hospitals in Limpopo, patient files consist of a number of loose papers held together in an open cover. Healthcare workers randomly use these papers to enter patients' information.

*Any empty space, on any piece of paper, in no chronological order, is used to write medical findings making it difficult to know what is going on with the patient.*

When notes are not in order, it takes time to compile a clinical picture of the patient during any visit and to find laboratory results such as the latest viral load. To gain time and efficiency new client files have been developed for ART sites across the District. Currently, most sites (hospitals, accredited PHC clinics) in Mopani are using the new patient files.

The new patient file

The file consists of different sections, demarcated by dividers, where health professionals can write their follow up notes: an adherence section, clinicians section, dietician section, laboratory results, treatment contract, etc.
Some pages consist of pre-printed formats and serve as checklists to remind healthcare workers what needs to be done.

A summary on the opening page contains an overview of patient’s clinical indicators over time.

The files are printed in bulk and cost about R20 each, depending on the number of pre-printed pages. The files are a success and Limpopo Department of Health and Social Development is currently considering taking over the production for all the ART sites.

The file storage system

Each patient eligible for ART is given a file number which is written on the cover of the file and in the patient’s health passport. The file number consists of the first three letters of the site’s name, two numbers indicating the entry-year and two additional numbers indicating the patient’s entry order. For example: Xih0967 is the 67th patient registered in 2009 at Xihlovo clinic. This gives insight in the number of clients registered per year. A register keeps file-numbers and demographic information together.

Files are stored in cabinets and filed by file-number, not alphabetically, which saves time in retrieving and storing.

Laboratory, X-ray, and all other patient information should be cross-referenced with the patients file number to maximize efficiencies. However, the lab in Mophani is not yet willing to participate.

References:
1. Edited from:
   • Khutšo Kurhula A programme providing comprehensive HIV and AIDS care and antiretroviral treatment at a primary health care level Report March 2009.
   • Poster presentation: Durban SA AIDS Conference 2007 Tools to start wellness programme in preparation for ART at clinic level Marga Vintges, Gert Marincowitz, Quionda Perkins
   • Peters RPH et al. Low Treatment default rate in a nurse-based ART clinic in rural Mopani District, Limpopo Poster presentations
   • Khutšo Kurhula support centre HIV/AIDS care and ARV roll out in Primary Care, Mopani district, Limpopo
2. Dr Marga Vintges KK (personal communication)

Contact:
1. Khutšo Kurhula, Tzaneen – Ms Monty Nyakane, Operations Manager – 015 3074893
2. Helen Struthers, Director – struthers@anovahealth.co.za, www.anovahealth.co.za
iDART – a free electronic ART information system

A software system for managing large ART sites through pharmacy and data support

The problem

Pharmacies are often short staffed with pharmacists having to manage ever-increasing numbers of patients on ART.

The change

iDART, the ‘Intelligent Dispensing of ART’ system, is a software (IT) solution for supporting the dispensing of ART drugs and for managing the drug supply chain and for assisting with programme and patient management.

iDART was specifically developed for the public health sector in South Africa by Cell-Life in collaboration with the Desmond Tutu HIV Foundation, to improve efficiencies in high volume ART sites. Target users are ART pharmacy staff.

Regulations already require that pharmacies capture certain information when medication is dispensed including the date, the patient’s demographic identifiers (age, gender and contact details) and details about the prescription. By adding extra fields such as the date ART is collected by the patient, pharmacy-based records can be used to identify patients who did not pick up their medication. Adding other fields such as regimen changes or drug toxicity can expand the use of the pharmacy record even further and provide data for programme evaluation and reporting without adding to the workload of busy clinics.

iDART is being used in some international sites and in a number of sites across South Africa including the Hannan Crusaid Clinic in Guguletu and Xihlovo clinic in Grace Mugodeni Health Centre in Limpopo.

iDART can be downloaded free from the internet (http://www.cell-life.org/idart/download) or be introduced to a facility with training and support (http://www.cell-life.org/contact-us).

How it works

The programme is used for:

- Pharmacy to manage:
  - supply of ARV stocks
  - dispensing of drugs
  - printing of reports

Partners:

- Cell-Life
- Desmond Tutu HIV Foundation
- Limpopo Provincial Health Department
- Western Cape Provincial Health Department
- National Department of Health
- ANOVA Health Institute

Location:

- Limpopo
- Guguletu, Cape Town, Western Cape
- Soweto, Gauteng

“...every week the pharmacist assistant gives us a list of clients that didn’t show up in time for their treatment. We don’t even have to check the files anymore.”

Programme Manager rural ART site
Data management to

- identify patients who have not collected their medication
- report to government as required for ART sites
- report to international funders (such as PEPFAR)

The system operates through clearly identifiable, multi-lingual bar-coded labels that are created for patients and drug packets.

At the first visit, the patient’s demographics are entered, after which a small barcode sticker is produced and stuck on the file. A barcode-reader makes it very easy to find patients in the computer system if they present with their file.

**Drug-labels are also printed automatically in the local language with the patient’s name and date of the next appointment.**

The system supports the pharmacist to dispense accurately and therefore process clients faster. This increases capacity so the pharmacy can increase the number of patients and still be available to attend to individual needs.

The system helps identify patients who missed medication pickups so they can be recalled.
iDART also improves the quality of data for reporting to the National DoH and international funders (such as PEPFAR).

**Challenges**

Duplication occurs because, although iDART contains all the information required for managing an ARV pharmacy, staff are still required by DOH to complete and enter all information into the manual longitudinal register.

**Spread of the model**

Cell-Life has supported the implementation in over 35 sites and is currently working alongside Vodacom Foundation to identify and introduce the system to 20 new sites in a number of provinces. This project will include hardware and systems support for a year. High volume sites, with over 1000 patients, or sites likely to expand rapidly are selected with guidance from the provincial departments of health.

**Future Developments**

Future developments of the iDART software include the incorporation of SMS messaging and other cellphone technologies in an effort to improve patient monitoring and follow-up. Modules will include appointment reminders, adherence messaging, PMTCT targeted messaging and others.

---

**References:**

2. Dr Marga Vintges Khutsi Kurhula, Maureen Masinge, Pharmacist Khutsi Kurhula (personal communication)

**Contacts:**

1. Khutsi Kurhula, Tzaneen – Ms Monty Nyakane, Operations Manager – Tel. 015 307 4893
2. Helen Strothers – struthers@anovahealth.co.za, www.anovahealth.co.za
3. Dr Sikander Noor Mahomed, Cell-Life – 021 469 1111, noor.mahomed@cell-life.org
This section looks at interventions that reduce the loss of patients through the care pathway from HIV diagnosis to lifelong ART therapy.

To meet the NSP targets for ART initiation, adequate numbers of patients need to arrive at the ART clinic for initiation. This requires active case finding (see Section 2), ongoing monitoring of pre-ART patients until they qualify for ART, successful referral and preparation for ART and maintenance in lifelong ART care.

**HIV positive patients are lost to care all along the care pathway, between clinic visits and between different facilities.**

*The Breakthrough Series* is a systems improvement model that brings frontline healthcare workers together to identify gaps at each step of the care pathway and to use their own creative ideas to find solutions to these problems. We describe some of these ‘home grown’ solutions that prevent the loss of patients from care.

Other models that strengthen the HIV healthcare systems are highlighted in this section: *district wide teamwork improves CD4 turn-around time; a systems view of the district allows the reallocation of resources to unblock a procurement bottleneck; special focus clinics for adolescents on ART and integrated TB/HIV services improve the clinic experience for patients and achieve better outcomes; the Patient Advocate model for community workers improves adherence by supporting patients on ART in the community and lessons learnt in ART adherence are used to improve adherence to TB treatment.*
The Breakthrough Series: A systems improvement model for rapidly accelerating access to ART

Frontline healthcare workers improve access to ART using large scale quality improvement methods

The problem

Systems improvement models are needed to support the rapid scale up of HIV/AIDS care in resource constrained settings in order to reach the National Strategic Plan target for ART initiation (80% of need) and PMTCT (<5% peri-natal transmission) by 2011.

The change

The Breakthrough Series Model has been successfully used in a number of sub-districts and provinces in South Africa to rapidly strengthen HIV/PMTCT healthcare systems to meet the NSP targets.

The “Breakthrough Series (BTS) Collaborative” is a structured quality improvement model that allows change to happen simultaneously over large parts of the system. All healthcare facilities in the sub-district are linked into a learning network to accelerate peer-to-peer learning, set common aims and goals and systematically improve the reliability of HIV care using quality improvement (QI) methods (see box at the end of this model). The improvement project is time bound, usually lasting...
Tried & Tested: Models for the scale up of HIV prevention, treatment and care from South Africa and beyond

18–24 months, and punctuated by six-monthly workshops called Learning Sessions where representatives from the clinical sites are taught to use routine data to analyze performance gaps in the sequence of HIV/PMTCT care steps, select change ideas to close specific gaps, and to use rapid-cycle testing methods to evaluate ideas and ensure the change leads to an improvement.

**Between workshops, clinics form improvement teams that use these quality improvement skills to close gaps along the HIV care pathway.**

These activities result in the development of local solutions to local problems that easily and rapidly spread to other sites in the learning network resulting in simultaneous improvement over the whole system.

Change ideas generated in one sub-district are often applicable to other sub-districts and can be used to accelerate the pace of change by spread though the district, province or nation. Changes that have been shown to work are compiled into a “Change Package” for testing and adaption in other facilities allowing change to spread rapidly as new sub-districts start their own BTS projects. *Retaining Patients in Care* in this section demonstrates multiple changes developed over the whole care pathway in a Breakthrough Series Collaborative in Cape Town.

Quality improvement skills learnt through the HIV/PMTCT improvement project are also applicable to other healthcare programmes.
Results

The Breakthrough Series has been successfully used in five provinces in South Africa to meet NSP targets for ART initiation and PMTCT. The model has subsequently been used by the National Department of Health to structure the Accelerated Plan for PMTCT.

Case study: Inner City Johannesburg, Region F

The Inner City ‘Learning Network’ comprised fourteen inner city primary health clinics, one community health centre, one district hospital and one tertiary care clinic. (Starting in half the clinics in August 2006 with expansion to all clinics in August 2007).

**HIV related ‘stretch’ targets were set for ART initiation, to be reached within the 18 – 24 month time frame of the project expansion.**

To achieve these outcomes, steps in the HIV care system at the primary care level prior to initiation were strengthened and chances of losing patients at each step were minimized to ensure an adequate number of patients were identified and tested for HIV, and then referred for ART. Referral systems were strengthened to ensure clients arrived at the ART clinic. The NSP target was reached within the intervention period:
### Example of a Change Package for strengthening pre-ART HIV care

<table>
<thead>
<tr>
<th>Changes/interventions made to improve the sequence of care steps prior to ART initiation</th>
<th>CD4 count testing</th>
<th>Patient collection of CD4 results</th>
<th>Referral for ART</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All PHC sites providing testing</strong></td>
<td>Bundling HIV test with CD4 count test: same location in rapid sequence</td>
<td>Fast track queue for results</td>
<td>Standardized up-referral forms</td>
</tr>
<tr>
<td><strong>HIV health talks in waiting areas</strong></td>
<td>Start of care for HIV+ patients at PHC sites</td>
<td>Decreased results turnaround time from lab to clinic</td>
<td>Relationship building between PHC and initiation site staff</td>
</tr>
<tr>
<td><strong>Group counselling, couples counselling</strong></td>
<td>Patient files marked with barcode signaling CD4 testing done and that patient is HIV+</td>
<td>Client counselling on importance of knowing CD4 results</td>
<td>Patient follow-up workers appointment reminder calls</td>
</tr>
<tr>
<td><strong>Engagement with traditional healers</strong></td>
<td></td>
<td>Improved documentation of patient contact info</td>
<td>Improved documentation of patients received</td>
</tr>
<tr>
<td><strong>Cross referrals of TB, Family planning, STI patients for testing</strong></td>
<td></td>
<td>Communication on confidentiality</td>
<td></td>
</tr>
<tr>
<td><strong>VCT campaigns</strong></td>
<td></td>
<td>Patient follow-up reminder calls</td>
<td></td>
</tr>
<tr>
<td><strong>Counsellors placed at each service site</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Integration of HIV services into all services and rooms – all staff effort; provider initiated testing and counselling (PITC)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### References:
2. Patricia D Webster (Institute for Healthcare Improvement, Cambridge, MA USA) et al. *Using quality improvement to accelerate progress towards universal HAART coverage in an inner city region of South Africa*.
4. Cathryn E. Green, MBA (Institute for Healthcare Improvement, Cambridge, MA) et al. *Increased Access to Highly Active Antiretroviral Therapy (HAART) in a Rural Health District of South Africa Through Inclusion of Primary Care Sites and Application of Systems Improvement Methods*.

### Contacts:
1. Winnie Moleko, RHRU – 011 725 7700, wmooko@rhru.co.za, www.rhru.co.za
2. Dr Michèle Youngleson, Institute for Healthcare Improvement – m.youngleson@mweb.co.za
Reducing the loss of patients from care

Home-grown solutions from an HIV/AIDS Improvement Project in Cape Town

To reach the National Strategic Plan (NSP) target for ART initiations (80% of need) adequate numbers of eligible HIV positive patients need to be identified and referred for ART. However many patients are lost at every step of the care pathway.

This sub-section illustrates changes that were innovated and tested in an improvement project that prevented the loss of care at each step of the care pathway and allowed the sub-district to reach the NSP targets for ART initiation.

The graph shows the steady increase in monthly initiations during the innovation phase of the HIV/AIDS Improvement Project. Initiations jumped to reach the NSP target soon after the changes presented in this section were spread to the whole sub-district.
Between HIV diagnosis and referral for ART

Making sure patients receive their CD4 results

Many patients are lost from care after HIV diagnosis. They either do not have a CD4 count assessment or they do not return for the results. The three interventions below help to make sure there is proper follow through after HIV diagnosis.

“Bundling” CD4 with HIV diagnosis

The problem

Every time a patient is asked to return to the clinic for an intervention we risk losing the patient from care. Taking advantage of the patient being in the clinic to do as many interventions as possible reduces the risk of losing the patient from care.

The change

Doing CD4 on the same day as HIV testing ensures all patients get CD4 tested.

“Bundling” means doing two or more things at the same time. Doing CD4 on the same day as HIV testing ensures all patients get CD4 tested.
Ensuring patients get their CD4 results

The problem
Patients often do not return for their CD4 count result. Yet the results show that many of the patients are in urgent need of ART.

The change
The change was to triage CD4 results and recall patients with low CD4 counts. Methods of recall used include phone, letter and community worker.

Some clinics designed fast track processes for CD4 results so patients do not need to wait in queues for results. An example is allowing patients to get their CD4 results from the treatment room where the blood was taken and results are recorded in a book. The patient’s folder is only taken out if the CD4 count is low and the patient is eligible for ART. This eliminates unnecessary waiting times.

The result
Follow up of patients with low CD4 count and timely referral for ART was improved.

CD4 results are recorded in a book. Low counts are highlighted and patients are recalled for referral for ART.
Creating a safety net for the HIV positive patient

The problem
Whenever a patient uses the healthcare service for any reason there is an opportunity to bring the patient back into HIV care. However, we often do not know that the patient sitting in front of us has a known HIV positive status.

The change
A safety net was created for HIV positive patients by discreetly marking their folders to make HIV information readily available to all healthcare workers. This would allow patients who have missed wellness appointments to be brought back into care at any future clinic visit.

In this example, an extra bar coded sticker from the standard CD4 laboratory form is placed on the inside sleeve of the patient’s clinic folder and dated. This discreetly indicates the patient’s positive status to any clinician who opens the folder at a future visit. It also immediately indicates when the last CD4 count was done.
Keeping patients in wellness care

Timely referral for ART requires regular monitoring of HIV positive patients until they qualify for referral

If patients are not retained in Wellness care after HIV diagnosis they do not get followed up regularly and often present for ART only when they are sick.

Sick patients take more care, time and resources to manage. Failure to refer patients for ART in a timely way places an unnecessary burden on the patient and the healthcare system.

The problem

In a busy Community Healthcare Centre (CHC) in Cape Town the on-site ART clinic was housed in a pre-fabricated building outside the main clinic building. ART doctors were frustrated because patients referred for initiation from the CHC were poorly worked up and were often very ill with low CD4 counts. HIV positive patients at the CHC were managed in an ‘integrated’ way by all nurses as they presented during the week and there was no designated special focus Wellness Clinic.

The change

A dedicated Wellness clinic for pre-ART care was started at the CHC.

Clinicians from the ART clinic helped the CHC establish a “Wellness Clinic” for pre-ART care and sent a doctor through weekly to train and mentor CHC staff. The new Wellness Clinic was placed in the CHCs Chronic Care service that offers dedicated “club” days for a variety of chronic diseases including diabetes, hypertension and epilepsy and now Wellness.
Results

The ART doctor reports that the Wellness Clinic has had a very positive impact on the management of HIV positive clients in the CHC.

- Patients feel much better knowing that there is a support structure for them after they have been tested positive and before they are eligible for ART
- The "vibe" in the club rooms is positive because patients become accustomed to the facility and the medical personnel
- Clinicians feel a lot better knowing that the patients are reliably taken care of
- The wellness clinic has become a portal of communication between the doctors at the CHC and at the ART clinic. They were not communicating well previously.
- Most importantly, the burden of disease for clients, the ART clinic and CHC has been minimized.

Reference:
Verbal communication: Dr David Daramola, Cape Town Metro District Health Services
Making sure patients arrive at the ART clinic

Many patients who are referred for ART do not arrive at the ART clinic. A number of interventions increased the likelihood of patients reaching the ART clinic.

The most powerful intervention to improve access to ART is to initiate ART in primary care where ART is more geographically accessible, transport is less expensive and sick patients do not have as far to go (see models for Decentralizing Care in Section 3).

However, even with an in-facility ART services in primary care, patients can get lost between the referring sister and the ART room if it is in a different part of the clinic.

A simple patient-friendly change that supported the patient to get to the clinic dramatically increased attendance at a busy primary care clinic. Once the decision had been made to start ART, the referring sister accompanied the patient across the clinic to the in-facility ART room and personally introduced the patient to the ART staff.

The graph shows the increase in attendance at the on-site ART clinic once patients were accompanied across the clinic to the ART room on referral. (The gaps in the blue line shows periods of missing data.)
Other changes that increased new patient attendance at distant ART referral sites included:

- Arranging for PHC staff to visit the referral ART site so they were more informed and could better describe the situation to patients they were referring.
- The first two ART readiness counselling sessions were done at the referring clinic, so staff were more knowledgeable and patients could make an informed decision about attending the ART clinic. In addition, this reduced the number of visits the patient had to make to the ART clinic before initiation.
- Booking appointments by phone and having an alert system at the referral site if patients did not arrive.
- Having patients choose a specific appointment date that suited the patient.
- Having special interest days at the referral site – e.g. paediatric day and ‘Mothers’ Day’ for pregnant women.
- Flexibility around the need for a treatment supporter.
Reducing the loss of patients before initiation

Even when patients do arrive at the ART clinic after referral, many are lost from care before they are initiated on ART. These patients are in a high risk group with high viral loads and failing immune systems, vulnerable to developing opportunistic infections or dying or, in the case of pregnant or breastfeeding women, transmitting HIV to their infants.

It is essential to identify and remove barriers to accessing ART. Barriers to initiation and of ways of reducing loss before initiation are listed in the table below.

<table>
<thead>
<tr>
<th>Barriers to initiation</th>
<th>Reducing barriers to initiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health status – too sick to attend</td>
<td>Admit sick patients to step down facilities, hospice or home based care</td>
</tr>
<tr>
<td>Geography – site too far away</td>
<td>ART initiation at primary care level</td>
</tr>
<tr>
<td>Expense – multiple visits too expensive</td>
<td>Reduce the number of pre-initiation visits required</td>
</tr>
<tr>
<td>Preparation process not streamlined (too many visits required)</td>
<td>Do not force patients to have a treatment supporter – give support at the clinic if necessary, disclosure is a process</td>
</tr>
<tr>
<td>Health system puts barriers in the way of the patient – eg inflexible requirement for a treatment supporter</td>
<td>Make sure all steps are patient friendly and offer individual counselling if patient is not happy to attend group sessions</td>
</tr>
<tr>
<td>Preparation process not patient friendly – eg mandatory group counselling when patients weren’t ready for disclosure</td>
<td>Identifying and recall patients lost before initiation (see below)</td>
</tr>
</tbody>
</table>
A simple tool to identify patients lost before initiation

The aim

The aim was to close the gap between attendance at the ART clinic and initiation and to trace patients lost before initiation so they can be brought back and started on ART.

The change

A simple low tech BOX system made it easy to identify patients for recall.

How it works

There are two cardboard boxes. The folders of all new patients attending the ART clinic in the current month are put into one box (BOX 1). The folders are kept there until the patient is initiated on ART after which the folder is filed with the ART folders.

The next month’s new patient folders are kept in the second box (BOX 2), again until the patient is initiated on ART after which the folders are filed with the ART folders.

Folders left in the first box (BOX 1) by the end of the second month are reviewed to see if the patient missed an appointment. If so, the patient is recalled.

Results

The BOX SYSTEM made it very easy to identify patients lost before initiation. The gap between new patients arriving and the number of initiations closed because most patients responded positively to being recalled and returned to the clinic.

The BOX SYSTEM made it very easy to identify patients lost before initiation. Patients who had missed an appointment were then recalled and most returned to the clinic.

Partners:
- Cape Metro District
- Western Cape Provincial Department of Health
- Cape Town City Health
- Institute for Healthcare Improvement

Location:
- Eastern and Mitchell’s plain sub-districts, Cape Town
Tried & Tested: Models for the scale up of HIV prevention, treatment and care from South Africa and beyond

Spread and adaption of the change

The idea was tested at a PHC that had a high TB burden and started an in-facility ART clinic. Instead of boxes, two separate shelves were used for the new patient folders. Folders left on the first shelf after a month were reviewed to identify patients lost before initiation. It was noted that many of the lost patients were in TB care at the clinic.

The graph below shows the increase in initiations after this system of identifying and recalling patients was started.

References:
1. Dr Michèle Youngleson, Institute for Healthcare Improvement (personal communication)
2. Prof Ashraf Coovadia, Department of Paediatrics and Child Health WITS (personal communication)
3. Dr Janet Giddy, McCord Hospital (Personal communication)
4. Dr David Daramola (personal communication)

Contact:
Dr Michèle Youngleson, Institute for Healthcare Improvement (IHI) – 082 828 8332, m.youngleson@mweb.co.za
Unblocking a procurement bottleneck

A system-wide approach allowed a sub-district manager to solve a bottleneck at district level

With dual therapy PMTCT the target for HIV transmission rate at six weeks PCR is $< 5\%$ but in this deeply rural sub-district in the Eastern Cape it is $16\%$.

The problem

_Six of the 19 (32\%) fixed provincial primary care clinics were not providing Antenatal AZT because they did not have haemoglobinometers._

This basic equipment is needed to assess pregnant women for anaemia, a prerequisite for prescribing Antenatal AZT. That meant that HIV+ pregnant women from these six clinics had to be referred to another clinic for PMTCT. The area is mountainous and distances between PHCs are vast. Referral causes great inconvenience to clients increasing the likelihood that they will be lost to care and not receive PMTCT.

Although the sub-district had placed orders for haemoglobinometers 18 months previously, procurement was persistently held up at the central procurement office. The bottleneck was attributed to staff shortages at the procurement office. Repeated attempts to procure essential equipment were only met with frustration.
The change

The sub-district manager sent her own procurement officer to assist at the central office two days a week.

There she discovered a pile of procurement requests from the sub-district lying unprocessed in a pile on the floor. Requisitions had not been processed for months. Since the bottleneck had been identified, a change could be made.

The sub-district procurement officer took responsibility for processing the abandoned pile of requisition forms for her own sub-district.

The Results

Much needed haemaglobinometers finally arrived in the sub-district and all fixed clinics started providing Antenatal AZT. Other procurement backlogs were simultaneously unblocked and other equipment that had long been delayed began flooding into the sub-district (including 52 baumanometers, drug cupboards and first aid kits).

‘Closing the gap’ - the graph shows all fixed clinics now offer ANC AZT in the sub-district

Reference:
A-Plan case studies 2009

Contact:
Dr Michèle Youngleson, Institute for Healthcare Improvement – m.youngleson@mweb.co.za
The patient follow-up project

Keeping patients in ART care

The problem

National statistics indicate about 20% of patients started on ART in public sector sites become ‘lost to follow up’.

The same was found in ART roll-out sites in inner City Johannesburg (Region F). Half the patients who defaulted, defaulted within the first three months of initiating on ART and, since the average CD4 count at initiation was consistently less than 100 cells/µl, patients were at high risk of opportunistic infections and death. It was important to identify defaulters early and get them back into care as soon as possible.

The aim

The aim of the intervention was to reduce the number of patients defaulting on ART.

The change

The change was the design of the ‘Patient Follow-up Project’, that would enable ART initiation sites to immediately contact patients who miss their follow-up appointments and facilitate their return.

How the recall system works

Step 1. The clinic needs a way of identifying who has missed an appointment as soon as the appointment is missed (eg an appointment list/ left over folders / a pharmacy list).

Step 2. The patient is contacted by phone. The patient is informed about the importance of adherence to ART and returning to the clinic.

Partners:
City of Johannesburg Municipal Department of Health
City of Johannesburg Municipal Department of Health
Gauteng Department of Health
Reproductive Health and HIV Research Unit (RHRU)
Institute for Healthcare Improvement (IHI)

Location:
Inner City Johannesburg, Gauteng

Funders:
US President’s Emergency Plan for AIDS Relief (PEPFAR)
and provided with an alternate appointment (the date is often determined by patients). Notes about the telephone call along with the patients’ demographic and contact information are entered in the programme database.

**Step 3.** If a patient does not return to the clinic on the new appointment date, the above process is repeated.

If they still have not returned after three attempts or if their phone number is incorrectly noted in the clinic records, the patient’s details are forwarded to the home-based care team for follow-up in person.

---

**Step 4.** The home-based care team conducts a home visit for face-to-face contact with the patient.

---

**Results**

The return rate for patients who were contacted (either by voice mail or speaking to them) was 75% versus 63% for patients who were not contacted (wrong number, number not available or not answered/no response).

---

**Reference:**

RHRU 2009 Towards Best Practice: Programmes, Projects and Systems to Expand HIV Care in Inner City Johannesburg

**Contact:**

Winnie Moleko, RHRU – 011 725 7700, wmoleko@rhru.co.za, www.rhru.co.za
PATIENT FOLLOW UP SHEET

Section 1.
Form Completed by: ___________________  Today’s Date (dd/mm/yy) ________________
Facility Name: ______________________  Patient’s Baseline CD4 count _____ cells/mm³

Section 2.
Patient’s Surname: _______________  First name: _______________; Date of Birth/Age __________
Patient’s Clinic/File # (if applicable): _______________; Gender: □ Male □ Female
Patient’s Contact #: ___________________; Address: ______________________________
Next of kin name: ___________________; Next of kin Contact #: __________________________
Patient’s appointment date (dd/mm/yy) _______________; (which the patient missed)

Appointment missed:
□ Pre-ART: □ CD4 result pick up □ Referral for ART initiation □ Wellness (CD4>200) □ Post PMTCT
□ Adherence counselling session # ___ □ Other __________________________

□ Post ART: □ At initiation site □ At down-referral site □ Other __________________________
ARV Initiation date: _______________; Current Regimen: ______; Last CD4 count _____ cells/mm³

Section 3a.
Contact attempt 1: Date _______________; □ Contact made (proceed to section 4)
□ No Response □ Voice mail □ Left message with __________________________
□ Wrong number: □ Checked number; Correct number: __________________________

Contact attempt 2: Date _______________; □ Contact made (proceed to section 4)
□ No Response □ Voice mail □ Left message with __________________________
□ Wrong number: □ Checked number; Correct number: __________________________

Contact attempt 3: Date _______________; □ Contact made (proceed to section 4)
□ No Response □ Voice mail □ Left message with __________________________
□ Wrong number: □ Checked number; Correct number: __________________________

Section 4.
□ Spoke with the patient  □ Spoke with next of kin/alternate person (relationship) _________________

Reason for Missing Appointment:
□ Patient died □ 2 mo supply of ARTs □ Out of town □ Transport problems
□ In prison □ No day off from work □ Lack of finances □ Has enough meds: ______
□ Illness __________________________ □ Patient moved (city) __________________________
□ Transferred out __________________________ □ Hospitalisation (date) ________ (Reason) ______
□ Long waiting time at clinic □ Clinic staff attitude
□ Other (explain) __________________________________________

Section 5.
Importance of treatment adherence explained to patient? □ Yes □ No □ Not applicable
Importance of keeping appointment date and time explained to patient? □ Yes □ No

New appointment/patient promised to return? □ Date __________ □ None(reason) _______________
Contact information verified? □ Same □ New #: __________________________
Other Comments from contact: __________________________________________________________

Section 6. Actions taken & Final Outcome of contact with patient
□ Patient referred for home based F/U (see reverse side for details)
□ Patient did not miss appointment (explain): ________________________________________________________________________________
□ Returned to clinic: Date of return: __________ □ Date not in file or register
   Returned to clinic: □ On their own □ After call by PFUW □ After Home Visit
   Reason for returning to the clinic (if applicable): _____________________________________________________________________________
□ Patient referred to wellness clinic (CD4>200)
□ Patient did not return to clinic (after promising to return) — “start over” with a new PFU sheet
□ Other outcome (explain): ___________________________________________________________________________________________
### PATIENT FOLLOW UP SHEET
#### HOME BASED CARE REFERRAL FORM

| REFFERED TO: ____________________________ | |
| CONTACT PERSON: ________________________ | |
| PHONE NUMBER: _________________________ | |
| REASON FOR REFERRAL: __________________ | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| ADDITIONAL COMMENTS: __________________ | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| REFERRED BY: _________________________ | |
| SIGNATURE: _________________________ DATE: ___________________ | |
Adolescent clinic
Meeting the needs of HIV positive adolescents

The problem
As children on ART survive longer and into adolescence, HIV and AIDS has become a growing and substantial epidemic among older children. Proper care services are needed for adolescents who are on ART.

*HIV positive children who survived through to adolescence have specific health care needs.*

Children who grew up with non-biological parents are particularly at risk of physical developmental challenges, emotional problems and identity confusion in adolescence.

The challenge
The challenge is to improve the quality of life for young HIV positive people on ART and enable a smooth transition through adolescence to adult care.

The change
The change was to provide accessible youth friendly ART services that offer acceptable and adequate health services to adolescents.

How it works
NGO partner Enhancing Children's HIV Outcomes (ECHO) provides ART care and support to children, caregivers and adolescents in 14 HIV/AIDS facilities in Gauteng and North West provinces comprising three tertiary hospitals, a secondary care hospital, district hospitals and community health centers. The North West facilities are all rural and the Gauteng sites urban.

*Each facility runs an adolescent friendly clinic once a week providing continuity of ART care, psychosocial and psycho-educational care for young people aged 10-19 years.*

In one hospital there is a dedicated adolescent day, in others adolescents are seen on the paediatric ART day.

Adolescents who are stable on ART are booked for appointments once every 3 months (at the most) for continuity of care: thus, when properly adherent, they visit the clinic or hospital only 4 times a year for normal routine appointments to receive ART and ARV care.
The adolescents take the day off school to attend the clinic. Key activities include individual, peer group and caregiver support: the health service becomes a place where adolescents can engage in social activities and gain recognition among their peers. The psychosocial team consists of two professional psychologists and a senior counsellor. There is also a core team of outreach counsellors who move between the clinics once a day every week offering counselling support and adherence.

Open support groups are held during the clinic visit for adolescents (disclosed to and not disclosed to) coming for ART care. Those who do know their status attend closed support groups once a month or twice a month on Saturdays. Holiday support groups are held at the clinics each day, and those belonging to the closed support groups have an opportunity to go to camp. This programme receives funding support from UNICEF.

The outcome

Open support groups are held during the clinic visit for adolescents coming for ART care. Not all adolescents on ART know their HIV status because in some instances, caregivers have chosen not to have it disclosed to them. Open groups therefore do not focus on HIV but cover holistic care and life skills. While this can be a challenge at times, issues of confidentiality have to be respected and co-facilitators may choose to split the group in two if necessary, with groups defined by whether or not participants have been disclosed to. Adolescents who do know their status may attend closed support groups once a month or twice a month on Saturdays.

Holiday support groups are held at the clinics during school holidays, and those belonging to the closed support groups have an opportunity to go to camp. This programme receives funding support from UNICEF.

“I enjoyed the drawing and the drama”
Teenager who attends therapeutic support groups

“0’s skills include debating at school, sharing correct information with peers, his hopes and dreams are to become a magistrate or an actor, he would like to appreciate his mother and people at the clinic”
Describing a support group member who attended a school holiday camp

“No Now I know how important it is to talk to my child, the workshop gave us information to help us talk openly to teenagers”
Caregiver who attended a caregiver focus group discussion

Reference:
Mpefe Kethapile and Nataly Woollett, Enhancing Children’s HIV Outcomes’ (ECHO) personal communication

Contact:
Mpefe Kethapile and Nataly Woollett, Enhancing Children’s HIV Outcomes’ (ECHO) – 011 547 5005, 011 547 5000, mpefek@witsecho.org.za, natalyw@witsecho.org.za
Improving laboratory services in rural KwaZulu-Natal

A district forum of key stakeholders helps improve CD4 turnaround times

Logistical issues, such as restricted laboratory services, can hamper progress, delay access to ART and frustrate and demotivate health care workers at PHC clinics.

The problem

Uthungulu district in KZN has an extremely high burden of HIV-infection. While many of these people are clinically eligible for ART, progress was hampered by poor laboratory services.

Poor laboratory services and problems with storage and transport of specimens resulted in multiple requests for repeat specimens and long turnaround times for CD4 results.

The change

The change was to establish a district forum where all the relevant stakeholders, including representatives from laboratory services, district management, hospital and PHC clinic management, and community advisory board members would meet monthly to discuss important issues.

How it works

The problem was identified by the four ART outreach teams deployed by the Uthungulu District management to cover all PHC facilities in the district. These teams initiated and facilitated the establishment of the monthly district forum.
Ongoing monthly meetings of key stakeholders now take place convened by the district office.

Results

The forum has been running for approximately ten months. It is chaired by the district manager and meets regularly.

The monthly district forum has been key to resolving logistical challenges in the provision of ART.

Regular communication and dialogue with all stakeholders serves to improve ownership and partnership within the program, with:

- Improvement in provision of laboratory services
- Reduction in specimen turnaround times, particularly CD4 cell counts
- Diminished waiting periods for eligible patients to be initiated onto ART
- Better communication between stakeholders
- Improved relationships between health care workers and the community

Within a month of the initial meeting, there were improvements in provision of laboratory services.

A schedule was drawn up for daily dissemination of lab results and collection of specimens from PHC facilities at least twice a day. Logistical issues such as collection, storage and transport of specimens was discussed with health staff at PHC facilities and training provided where necessary. This has served to minimize the requests for repeat specimens and improved efficiency of the service.

CD4 turnaround times improved from two weeks to five days. The waiting period for initiation of ART for eligible patients has also decreased significantly from over 28 days to four days.

This has also served to improve relationships between health care workers and the community, as the community is able to benefit from the improved communication and teamwork at district and health facility level.

Challenges

Budgetary constraints remain a challenge and high staff turnover has a direct impact on continuity of the program.

Reference:
Dr. Donna Jacobs, Health Care Improvement Project / University Research Co., LLC (HCI/URC) – personal communication

Contacts:
1. Dr Donna Jacobs – 072 377 6298, 012 342 1419, donnaj@urc-sa.com
2. Dr Tumi Moutloatse – 0798856289, 012 342 1419, tumimo@urc-sa.com
3. Mrs. Tina Maartens – 0823774267, tinam@urc-sa.com
Double trouble: HIV and TB

From complete separation of services to full clinical integration of HIV/TB care and ART

The problem

The risk of getting TB is 26 times greater in HIV positive people and TB is the main cause of death in people with HIV.

Incidence

South Africa has 0.7% of the world’s population but 28% of the world’s patients co-infected with HIV and TB. 75% of TB patients are HIV positive.

Morbidity and mortality

Between 1997 and 2005 there was a 335% increase in TB deaths in South Africa.

Patients co-infected with HIV and TB are at high risk of morbidity and mortality.

In HIV positive patients TB progresses more rapidly than in HIV negative patients, with a higher chance of hospitalization and death. And HIV progresses more quickly to AIDS in patients who also have TB.

There are challenges with both diagnosis and treatment of HIV positive patients co-infected with TB (see box below). In addition, healthcare system weaknesses result in TB cure rates of only 62% for the whole country (target 85%).
Diagnostic and Treatment challenges for HIV/TB co-infection

<table>
<thead>
<tr>
<th>TB Diagnostic Challenges in HIV positive patients</th>
<th>Treatment Challenges in TB/HIV co-infected patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ 50% smear negative TB</td>
<td>▪ increased pill burden</td>
</tr>
<tr>
<td>▪ increased proportion with extra pulmonary TB</td>
<td>▪ drug interactions</td>
</tr>
<tr>
<td>▪ atypical radiography</td>
<td>▪ shared toxicities</td>
</tr>
<tr>
<td>▪ more rapid clinical deterioration</td>
<td>▪ immune reconstitution</td>
</tr>
<tr>
<td></td>
<td>▪ inflammatory syndrome (IRIS)</td>
</tr>
<tr>
<td></td>
<td>▪ deterioration on TB treatment</td>
</tr>
<tr>
<td></td>
<td>▪ timing of TB patients starting ART</td>
</tr>
</tbody>
</table>

The context

This model was developed in Khayelitsha in Cape Town. 

*Khayelitsha has the highest known TB prevalence in the world (1,600/100,000 in 2006).*

TB, HIV and ART services were being delivered at different clinics by different clinicians. Patients were often attending two different clinics, which wasted both patient and staff time and resulted in delayed initiation of TB treatment and ART and inappropriate clinical care because of poor information transfer.

The aim

The aim was to decrease morbidity and mortality in TB/HIV patients and to make services more efficient and effective by:

▪ Increasing HIV testing of TB clients so they can access HIV care
▪ Diagnosing TB disease earlier in people infected with HIV
▪ Reducing the delay to ART of co-infected TB patients
▪ Comprehensive care for the co-infected patient: one patient – two diseases – one programme (same clerk/counsellor/nurse/doctor/folder/clinic)
▪ Creating a “one stop” service
▪ Improving cure rates for both co-infected and TB patients through a more patient-centred approach to adherence
▪ Benefiting from the experience of the excellent TB programme in the City of Cape Town to standardize the approach and the monitoring of ARV patients

The change

*The change was to create a TB/HIV/ART programme with the same administrative and clinical staff.*
How it works

TB, HIV and ART are all managed in the same primary care clinic by the same clinicians (nurses and doctors) who are all trained to manage both HIV and TB. There is a single reception area and a single folder for TB and HIV/ART clinical management. Patients have a single consultation at which both conditions are appropriately managed by the same clinician.

Additional staff was employed to provide ongoing support and mentoring.

Preventing TB cross-infection in the clinic

In any waiting room, HIV positive patients sit with undiagnosed TB patients so infection control is always important in ALL clinic areas. (See the box alongside for all levels of TB control.)

Results

HIV testing of TB patients improved and delays in accessing ART for TB patients and TB treatment for HIV patients was reduced.
The model was efficient with no cross-referrals or lost information. Staff were more competent knowing both diseases and patients were more satisfied because it was true one-stop service.

**Challenges**

Monitoring and evaluation of TB and HIV remain largely separate, with different registers, stationary and reporting for both diseases, even though some progress was made by incorporating some HIV indicators in TB reporting.

*There is a need to integrate TB and HIV stationery and monitoring and evaluation.*

**References:**
1. Edited from Gilles van Cutsem: TB/HIV Integration Why do we need it? What is it exactly? Presentation for Limpopo Department of Health Workshop 2010

**Contact:**
Gilles Van Cutsem, Médecins Sans Frontières – gillesvancutsem@gmail.com, 021 364 3490, 082 306 6771

Lessons learnt about adherence to ART can be successfully applied to improve adherence to TB treatment.
Enhanced tuberculosis adherence (ETA) programme

An adherence model from the HIV/AIDS programme improves adherence to TB treatment

The problem

*Adherence to TB medication remains a challenge across the country.*

The change

*The change was to use lessons from the successful adherence model for antiretroviral therapy to design a new adherence model to TB.*

The new model is called Enhanced TB Adherence (ETA).

How it works

The ETA model uses intensive treatment adherence counselling for patients; assessment of patients' living conditions at home, a treatment buddy to support treatment taking and lay health worker supported but self-supervised TB treatment. This is different from the Directly Observed Treatment ('DOTs') model in which every daily dose of medicine is provided by a third party (either at the clinic or in the community) who must watch the patient take the medicine. The table below highlights the differences between conventional Directly Observed Treatment Support (DOTS) for TB and Enhance TB Adherence (ETA).

The Enhanced TB Adherence model was implemented in five TB clinics following staff training.

The outcome

Approximately 70% of new TB patients at the interventions sites were placed on ETA. Patients spent an average of two weeks on facility based DOTs before taking their treatment at home. The patients felt that the treatment counselling had prepared them for their treatment and valued the support given by the treatment buddies, adherence counsellors and treatment supporters.

The adherence counsellors and treatment supporters felt the community benefited from having more information and that having an in-depth understanding of the patient's home circumstances helped them support the patient to take their medication.
Two month sputum conversion rates increased significantly in the ETA clinics compared with other sites.

Treatment outcomes improved at both ETA and comparison clinics.

**Spread and improvement**

The model has been recommended for wider use but some improvements would be necessary because the programme required considerable human resources, training and management. These would include:

- providing on-going training and supervision for staff
- increasing the stipend for lay counsellors to reduce turnover
- providing adequate space at the clinic for adherence counselling
- integrating TB adherence counselling with ART adherence counselling
- reducing the administrative load

*An integrated model for both TB and ARV patients is currently being piloted at one site using one field supporter.*

<table>
<thead>
<tr>
<th>Difference between old and new adherence models for TB treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOT</strong></td>
</tr>
<tr>
<td>Patient is initiated onto directly observed therapy in the clinic</td>
</tr>
<tr>
<td>Mode of treatment delivery: directly observed therapy</td>
</tr>
<tr>
<td>Information about TB, treatment etc. given by nurse informally during contacts with patients</td>
</tr>
<tr>
<td>Patient can receive DOT in the workplace, or at the clinic, or by visiting a DOT supporter in the community</td>
</tr>
<tr>
<td>Nurse sees patient at diagnosis, for DOT, for 2/3 month sputum and at the end of treatment</td>
</tr>
<tr>
<td>If the patient is placed on community based DOT, s/he visits a treatment supporter once a day to receive treatment</td>
</tr>
<tr>
<td>No formal integration of family or friends into the treatment plan</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Enhanced Tuberculosis Adherence Model</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient is placed on directly observed therapy in the clinic for a short period (approximately two weeks) while receiving adherence counselling</td>
</tr>
<tr>
<td>Mode of treatment delivery: self supervision</td>
</tr>
<tr>
<td>Dedicated lay adherence counsellor gives TB information to participant in 4 structured counselling sessions</td>
</tr>
<tr>
<td>Patient can take treatment in the workplace, or at a clinic, but can also obtain a one month supply of tablets from the clinic and self-supervise their treatment</td>
</tr>
<tr>
<td>Nurse sees patient at diagnosis, DOT for two weeks and, if the patient is eligible for self-supervision, once per month until end of treatment</td>
</tr>
<tr>
<td>If the patient is placed on self supervision, a treatment supporter visits the patient once a week to monitor treatment taking</td>
</tr>
<tr>
<td>Treatment “buddy” attends counselling and acts as support and reminder to the patient. The buddy can be a friend, family member or neighbour</td>
</tr>
</tbody>
</table>

Reference:
Edited from Final Evaluation Report Enhanced Tuberculosis Adherence Programme Sep 2009 Judy Caldwell et al, City of Cape Town Health Department, TB/HIV Care Association

Contact:
Judy Caldwell, Cape Town City Health – 021 400 2381, judy.caldwell@capetown.gov.za
Community based ART adherence support

Community based support increases adherence to ART and TB treatment

The problem

The success of antiretroviral therapy (ART) depends on a high level of adherence. Adherence to lifelong ART presents a major challenge especially where there are unresolved income, food, shelter and personal security issues. Psychosocial issues such as stigma also create barriers to care.

The aim

The NGO Kheth’Impilo (KI) (formerly Absolute Return for Kids (ARK)) developed a Patient Advocacy Model that offers community based support for adherence to ART so patients remain alive and continue to thrive on ART.

The Patient Advocate (PA) model

Patient Advocates (PAs) are lay health workers identified from the communities in which they live.

Their role is to support patients on ART and TB treatment in the community and act as a link between the clinic and the community.

To be selected for training, PAs need at least a grade 10 school leaving certificate and must have good credibility within their community. Other than that they need no special skills. Once they are appointed they are given in-house orientation at the ART site and a two-week training in HIV/AIDS, TB, PMTCT, children on ART and adherence as well as the processes needed to access social grants.

PAs are managed by a co-ordinator and each facility has a site facilitator who helps to allocate patients to the PAs and co-ordinate their interactions. PAs are supported through ongoing debriefing and mentorship.

They have to sign a confidentiality clause as part of their contract and permission must be obtained from patients before a patient advocate is assigned to them.

Patients are educated about HIV as well as treatment and adverse events.

3 separate health education sessions are conducted by the PAs.

- HIV/AIDS awareness
- Lifestyle
- Adherence on ART

If pregnant, health education on pregnancy, PMTCT, infant feeding and testing is also offered.
Once patients qualify for ART and have accepted the help of a PA, they are assigned a PA to support them throughout their treatment. To start with, the PA conducts a home assessment to check for treatment readiness. In some cases, if it is clinically possible, treatment might have to be delayed by a week or two until critical issues are resolved. This has been shown to ensure high retention rates and good viral load suppression. Patients who are not willing to have PAs visiting their homes, or those who are working, are offered on-going support at the clinic by the site facilitator and facility based adherence counsellors.

**Once patients are initiated on ART they are divided into two categories:**

- stable patients and VIPs (Very Important Patients) who need more intensive support.

The visiting schedule is determined by the degree of support required. VIPs include all new patients started on ART, very ill patients, patients with very low CD4 counts, patients co-infected with HIV and TB, opportunistic infections, serious psychosocial issues etc. Frequent visits could vary from daily within the first week of starting ART, to weekly or fortnightly and then monthly. After six months on ART, patients are assessed to decide whether they can be treated in the stable group.

Stable patients on ART are monitored through clinic attendance and pill pickups and will only be visited at home if there is an urgent need. If a stable patient defaults from treatment he/she will revert back to being a VIP with more frequent contact.

**Record keeping plays a vital role in the monitoring of patients. A paper-based system is used and stored confidentially at the ART site or with the local NGO.**

Patient Advocates play an important part in a weekly multi-disciplinary meeting held at the sites where they provide feedback on the home assessments and assist the clinical team to decide on the appropriate action for a patient regarding ART. They are regarded as the “eyes and ears” of the clinic team and provide clinic staff with insight into any domestic challenges that might impact negatively on adherence.

The PA’s scope of service to patients has recently been expanded to include support not only with adherence to ART but also with accessing social grants. PAs help patients access critical documents for grant applications and the grants themselves once they have been approved.

**Results**

The PA community based adherence support programme significantly improved adherence for patients on ART.

Patients with a patient advocate (PA) had significantly better treatment pick up rates and viral load suppression (at six months) compared to patients at health facilities without out PA services. Patients at health facilities with PA services also maintained a suppressed viral load, remained in care longer, and had significant increases in their radius of disclosure, doubling the number of people disclosed to after six months as compared to patients with no PA. It was also demonstrated that sites with
PAs had better TB cure rates and treatment completion rates as well as significant reduction in loss to follow up.

Some PA’s are now directly employed on contract by KI. They work an eight hour day and are paid according to Government Community workers’ rates and benefit from the company’s policies. Other PA’s are managed by other NGO’s and KI pays an administration fee for the management provided. These PA’s sign contracts with the NGO and are directly managed by that NGO’s policies especially regarding human resource policy and benefits. The NGO reports monthly to KI regarding outcomes and challenges.

**PA’s training allows for career pathing so that with extra training, they can become counsellors, enrolled nurses or auxiliary social workers.**

**Spread of the model**

During the past five years KI worked closely in partnership with the Western Cape Provincial Department of Health and shared positive experiences about the use of lay healthcare workers to support adherence. The Western Cape Provincial Department of Health uses the PA model in ART sites even where KI is not operating.

**References:**


**Contact:**
Anita Jason, Kheth’Impilo – 021 447 0822
Section 6: Human Resources

This section describes models for providing adequately skilled healthcare workers to manage the scale up of HIV/ART services.

We look at ways of harnessing the pool of unemployed healthcare professionals (pharmacists, nurses and doctors) for the public health service and models for reducing the loss of nurses from the public healthcare system through HIV related causes including burnout, illness and death.

However, a conventional doctor-driven approach to ART will not be possible if lifelong care is to be provided to the five to six million South Africans estimated to be living with HIV. Task shifting and sharing coupled with the formation of new cadres of healthcare and community workers to take on less skilled or mid-level functions, is necessary to meet human resource needs and we cover some task shifting models in this section.

To support the large-scale realignment of responsibilities and to sustain quality of care, all models for task shifting and sharing demonstrate the need for ongoing training, mentoring and support, as well as strong up and down referral systems. ‘Task dumping’ is avoided if staff take on new functions only when they feel confident and competent to do so and when they are relieved of some of their other functions as they take on their new roles.

Nurse management and initiation of ART is central to many of the models and two training models for nurse initiation of ART in primary care, STRETCH (Streamlining
Tasks and Roles to Expand Treatment and Care for HIV) and the WHO Integrated Management of Adolescent and Adult Illnesses (IAMI), are covered in this section.

Models for realigning functions through task shifting and sharing between cadres of healthcare workers are illustrated throughout this document particularly in Section 3 which looks at decentralising access to ART and decongesting large ART clinics.

Ideally, all cadres of healthcare workers should work at their maximum level of skill. By continually up-skilling all cadres to take on new functions and responsibilities, the skills gap can be safely and effectively closed.

Reference:
1. Building the Capacity of the primary health care system for HIV/AIDS diagnosis, care and treatment in South Africa: Task shifting recommendations document Technical Task Team (TTT) on Treatment, Care and Support July 2009

Contact:
Frayne Mathijs – fmathijs@gmail.com
**Filling the human resource gap**

**Tapping into an underutilized pool of nurses and doctors to fill the resource gap**

---

**The problem**

*The demand for large-scale HIV/ART services has placed pressure on an already limited supply of professional healthcare workers.*

Foreign doctors are confronted with time consuming and complicated processes for professional registration and acquisition of work permits.

---

**The aim**

Models were needed for adequately resourcing HIV programmes without redeploying professionals already active in public health care systems, as well as for placing doctors and nurses in under-resourced rural areas.

---

**The change**

*The change was to tap into latent pools of healthcare professionals*

Untapped sources of healthcare professionals include:

- clinicians who cannot commit to working fulltime, such as women with small children
- retirees
- foreign doctors and nurses who are retired, on sabbatical or who volunteer
- foreign doctors and nurses, including refugees, whose countries do not have bi-lateral agreements with South Africa and who may therefore not work in the country. It is estimated that there are 700 doctors who fall into this category and whose skills remain unutilized.

---

**The changes**

**Flexible employment policy**

NGO Kheth’Impilo, previously Absolute Return for Kids (ARK), developed a flexible employment strategy to draw on these latent resources. Professionals dictate the number of hours they are available to work (eg 2 days a week, mornings only) and

---

**Partners:**

- Kheth’Impilo (KI)
- Africa Health Placements (AHP)
- Foundation for Professional Development (Pty) Ltd
- Rural Health Initiative

**Location (KI):**

- Western Cape
- Eastern Cape
- KwaZulu-Natal
- Mpumalanga

**Location (AHP):**

- Countrywide

**Funders (KI):**

- US President’s Emergency Plan for AIDS Relief (PEPFAR)
- Absolute return for Kids (ARK)

---

Previously retired staff make a valuable contribution to HIV/ART care
clinics’ schedules are filled accordingly after all staff have been inducted on the SA NDoH ART guidelines.

**Cutting through the Red Tape**

Not-for-profit organisation Africa Health Placements (AHP) is a joint venture between Rural Health Initiative and the Foundation for Professional Development. AHP works with Provincial and District management to assist NGOs and the public health care service to fill vacant professional staff posts by placing foreign and locally qualified health practitioners in rural and underserved areas throughout South Africa. They facilitate the applications of foreign doctors for registration with the Health Professionals Council of South Africa, and assist them to obtain endorsement to work in South Africa from Foreign Workforce Management Programme (FWMP), Department of Health.

The outcome

Drawing on the latent pool of healthcare workers, and receiving assistance from Africa Health Placements, has provided Kheth’Impilo with a ready source of committed and competent healthcare professionals to fill essential positions. Many of these professionals have subsequently taken up permanent positions in the public health care service.

By September 2009, AHP had placed 1300 health professionals in government clinics and hospitals since 2006, over half of whom were foreign nationals.

Following their successes, AHP has recently taken their model to Lesotho and Botswana.

Reference:

Contacts:
1. Kheth’Impilo – 021 447 0822
2. Africa Health Placements – 011 328 1300; placements@ahp.org.za

Previously retired staff make a valuable contribution to HIV/ART care
Special clinics for healthcare workers

Models of HIV/AIDS care for health care workers

The problem

Many health care workers are already experiencing burnout and the scale up of ART to large numbers of adults and children will further add to their workload.

In addition, HIV-infected healthcare workers often struggle with stigma. They fail to access HIV testing and treatment early and die of AIDS. A survey in 2004 found an overall HIV infection prevalence in health care workers in South Africa of 15.7% (compared with an estimated prevalence of 15.5% among adults). Programs to combat staff burnout and avert deaths due to HIV/AIDS are essential if widespread access to ART is to be achieved.

The change

The change was to provide convenient, confidential, and holistic care for healthcare workers affected by caring for HIV-infected patients and for HIV-infected healthcare workers.

How it works

McCord Hospital, Durban

McCord Hospital is a government-subsidized urban facility. In late 2001, after several staff members died of AIDS, the clinic began to provide ART to staff who were in desperate need of treatment.

The administration building at McCord Hospital in Durban.
Health care for staff is provided free of charge at the staff clinic. HIV care is integrated with other comprehensive services for acute and chronic conditions, including TB. All HIV-related counselling and blood tests (including HIV testing and CD4 cell count), are performed at the staff clinic by the staff doctor. Adherence training is done during consultations, making access to HIV counselling and testing (HCT) and ART initiation seamless and convenient.

Other interventions at McCord Hospital include small group discussions that nurses and lay counsellors conduct with other staff members, about ART, overcoming stigma and the need for early testing.

The psychology department at the hospital holds ongoing debriefing sessions for clinicians working in the medical wards and HIV clinic and support groups for nurses address the emotional burden of providing care for dying patients, particularly adolescents and children.

**Mseleni Hospital, rural KwaZulu-Natal**

Mseleni Hospital is a Department of Health hospital in a remote rural area of KwaZulu-Natal. Like McCord Hospital, special health services for staff were initiated in response to the overwhelming need to provide care and treatment to caregivers faced with fear and stigma.

Healthcare for staff is provided through the staff clinic or, if preferred, through local private practitioners.

ART for staff has been available free of charge through the staff clinic since 2005. Counselling and testing of staff are done by a number of people, including a trusted lay counsellor who has publicly declared that he is HIV positive and is receiving ART.

**Tshedisa Institute, Gaborone, Botswana**

In May 2006, in response to the growing number of co-workers who were dying of or in need of treatment for HIV infection and who refused to use the existing in-house staff clinic facility, doctors at the HIV/AIDS clinic at Gaborone’s Princess Marina Hospital established a private, independent facility for health care providers, within walking distance of the hospital.

The program focuses on health care workers who are HIV infected and/or are affected by caring for individuals with HIV infection and are experiencing stress, compassion fatigue, and burnout. It offers holistic health services, including one-on-one counselling, support groups, creative arts therapy (e.g. dance, yoga, visual arts, poetry and creative writing), comprehensive HIV/AIDS testing and treatment, general medical checkups and a quiet garden for staff to enjoy.

Certificate courses in skills such as stress management, cognitive behavioral therapy, and group counselling are also offered for health care workers.
Outcomes

McCord Hospital, Durban and Mseleni Hospital, rural KwaZulu-Natal

Since the staff clinics started, increasing numbers of staff have accessed HCT. In 2008 and 2009 239 staff tested for HIV and 41 (17%) were HIV positive. Many staff members have started receiving ART. (See graph below.)

*Morale has improved as staff now see their colleagues showing clinical improvement instead of dying.*

A number of staff receiving ART have disclosed their status to friends, colleagues, and patients, to encourage others to undergo testing and start receiving treatment.

In Mseleni Hospital, staff members have even elected to use their own names, as opposed to anonymous codes, on blood test reports. However, some staff categories, particularly laborers such as grounds men and maintenance assistants, are not optimally accessing HCT and ART.

At Gabarone’s Tshedisa Institute services uptake has been significant, 12% of staff tested were found to be HIV positive and a number have started receiving ART. Many staff participate in one-on-one counselling or weekly creative art therapy classes.

The pie chart shows what has happened to staff at McCord Hospital. 70% are still in care at the hospital, 20% have changed service provider (CSP), 6% have died and 4% have stopped treatment.

References:

Contact:
McCord Hospital: Dr Eleez Hurley – emilloots@telkomsa.net
S-T-R-E-T-C-H! Streamlining Tasks and Roles to Expand Treatment and Care for HIV

Training and structures for setting up nurse ART initiation and management in primary care

The problem

*The challenge was to ensure reliable nurse management and initiation of ART in primary care to improve access to ART and free up doctors to manage complex cases.*

The change

STRETCH (Streamlining Tasks and Roles to Expand Treatment and Care for HIV)^1^2 is a phased system of training and support that enables nurses to comprehensively care for patients on ART, initially re-prescribing and, once they are confident, initiating new patients on ART.

**Primary care nurses with their STRETCH trainer**
STRETCH includes clinical algorithms, a toolkit for role definitions and health systems changes and a system of training and support.

How it works

Phase 1 – PALSA PLUS Training and pre-ART care

All PHCs are trained in PALSA PLUS which is a team-based approach to pre-ART care that uses a system of syndromic guidelines for the management of HIV/AIDS, STI and TB. PALSA PLUS standardizes and strengthens Wellness care. The PALSA PLUS trainer is a registered nurse employed in the sub-district (often a HAST co-ordinator).

Phase 2 – STRETCH and the management of stable patients on ART

The PALSA PLUS trainer is further equipped as a STRETCH trainer. STRETCH builds on PALSA PLUS by stepping up the nurses’ skill set from pre-ART to ART care. PALSA PLUS and STRETCH are delivered by trained nurse middle managers using educational outreach during short interactive onsite sessions over several weeks to months.

Where nurses are already managing stable patients on ART who receive a routine six-month follow-up by a doctor, STRETCH supports nurses to take over the routine six-month assessment of follow-up blood tests and re-prescription of ART, and only refer patients to a doctor if clinically indicated.

STRETCH also supports primary care clinics previously not managing ART patients, to begin the comprehensive management of stable patients on ART down referred from initiation sites.

Phase 3 – STRETCH and the initiation of new patients on ART

When clinics feel confident providing nurse managed ART for chronic stable patients and are ready to begin initiating ART, STRETCH supports them to do so. Guidelines assist nurses to identify clients that they can safely initiate and when to seek additional support from a more experienced clinician.

STRETCH supports each clinic to have a management team in the facility, (led by the facility manager and comprising managers, clinicians, pharmacy and clerks), to oversee the necessary health systems changes. Role descriptions are clearly defined in the toolkit.

More recently, STRETCH trainers in the sub-district have been linked with experienced ART clinicians from the referral ART clinics to provide further clinical mentoring and manage the complex relationships between different parts of the referral system.

It is recommended that STRETCH sites be supported by a pharmacist or pharmacy assistant to relieve nurses of pharmacy duties as they take on new responsibilities managing and initiating ART.
A Case Study in the Free State

In the Free State, each hospital ART facility was linked with nurse-run accredited ART sites. Until the STRETCH project, nurses at these sites were unable to re-prescribe ART. Consequently, every six months, patients had to travel to the distant hospital site to see the doctor who interpreted blood results and re-prescribed ART. This inconvenienced patients and placed a burden on hospital sites.

PALSA PLUS training to strengthen HAST care was completed in accredited sites. Sixteen of these clinics moved to Phase 2 with nurses fully managing chronic ART patients through STRETCH training and support.

The next step to nurse initiation of ART required clinics to declare themselves competent and confident to proceed with the next phase of STRETCH training.

Fourteen of the sixteen chronic care sites moved to nurse initiation of ART. Eight moved very fast and were initiating within two to four months of taking on re-preservation of ART for chronic patients. The others moved more slowly and barriers included staff changes, absence of a pharmacist or post basic pharmacy assistant or lack of storage for ART.

The outcome

The additional tasks of interpreting blood results and re-prescribing ART onsite significantly increased workload in these chronic management sites. However, the benefits outweighed the additional work and there was little resistance from nurses or patients. Access to care increased at primary level, continuity of care improved, outcomes were good, the caseload at the hospitals decreased significantly and hospital staff could focus attention on complicated cases.

In most of the fourteen clinics that started initiating ART, nurses were comfortable with sharing this task, they felt supported and that they were practising within their skill set. However, two clinics soon stopped ART initiation after severe adverse events (one leading to a death) shook their sense of confidence. After eight months of intensive support, one of these clinics has restarted initiation.

Controversy

There has been some criticism about criteria in the STRETCH guidelines that define and limit the clinical profile of patients eligible for nurse initiation. The concern is that some sick patients who are most at risk of death are often unable to access care at distant doctor-supported sites. Referral systems that ensure the safe management and timely initiation of sick patients in peripheral clinics (e.g. through phone consultation or roving teams) are necessary to maximize the model of decentralized ART initiation.

“We can stretch ourselves very far. This is our sisters, our brothers, our mothers we are nursing. Otherwise we would have gone to Australia or UK to work.”

STRETCH trainer
Principles for optimal task sharing/shifting to nurse initiated and managed ART:

- Unless changes to health workers’ responsibilities are clearly communicated, task shifting risks demotivating and frustrating workers
- Task sharing/shifting can only be done successfully if nurses feel competent and confident to take on the new scope of work
- Competency-based training, supervision, and clinical mentoring is essential
- A strong referral system and on site support for complicated cases is required
- The workload of nurses must be balanced as they take on new ART responsibilities. Further task sharing/shifting to nurse assistants of lay counsellors may alleviate nurses of other responsibilities

References:
4. Building the Capacity of the primary health care system for HIV/AIDS diagnosis, care and treatment in South Africa: task shifting recommendations document Technical Task Team (TTT) on Treatment, Care and Support July 2009

Contacts:
Dr Beverly Draper, Knowledge Translation Unit, University of Cape Town Lung Institute – 021 406 6979; b.draper@uct.ac.za, www.knowledgetranslation.uct.ac.za
Integrating HIV/AIDS into general care

Using the WHO Integrated Management for Adolescent and Adult Illness (IMAI) tool to strengthen HIV/AIDS and general healthcare

The problem

South Africa has a primary health care system that depends largely upon nurses as prescribers of essential medicines, supported by district-level medical officers. Referral to tertiary care is done as needed. The HIV epidemic has strained the healthcare system with many more patients presenting at all levels of care.

The challenge

Addressing HIV and the associated TB epidemic and simultaneously improving the general healthcare service is a challenge, particularly in our resource-constrained setting.

The change

The WHO integrated management tools provide an integrated and efficient approach to implementing multiple interventions at district level focusing on the health system, health workers and patients to ensure that quality health care is delivered.

The management tools comprise simple, standardized approaches to expanding access to prevention, treatment and care which can be broadly implemented across the district. A stronger district health system should result in improved patient referral, better integration of case management, and improved communication between levels of the health system, from the community to clinic to hospital.

There are four interlinked programmes:

- IMAI (Integrated Management of Adolescent and Adult Illnesses),
- IMCI (Integrated Management of Childhood Illnesses)
- IMPAC (Integrated Management of Pregnancy and Childbirth)
- IMEESC (Integrated Management of Emergency and Essential Surgical Care).

IMCI is widely used to standardise child health interventions throughout South Africa.

IMAI capacititates the health system to cope with the shift to providing good chronic care where patient self-management is key.

---

Partners:
Eastern Cape Provincial Department of Health
World Health Organisation (WHO)
Regional Training Centre (RTC) of Walter Sisulu University
Columbia University

Locations:
Cacadu, Nelson Mandela Metro, Amatole, Chris Hani, Ukhahlamba, Alfred Nzo and OR Tambo Districts, Eastern Cape

Funder:
Centers for Disease Control, South Africa
Tried & Tested: Models for the scale up of HIV prevention, treatment and care from South Africa and beyond

IMAI has an HIV/AIDS module for strengthening HIV prevention, care and treatment and also has modules for managing other chronic adult diseases such as MDR TB, hypertension, diabetes and mental illnesses.

IMAI, IMCI and IMPAC initiatives have been used in combination to support the scaling up of integrated HIV services in primary care. There are seven harmonized guideline modules that simplify evidence-based WHO guidelines for nurse- or clinical officer-led teams at health centres and outpatient departments of small hospitals as well as operational support.

There are five key elements:

1. Simplified guidelines
2. Effective capacity building
3. Mobilizing community response
4. A patient-centred approach
5. Integrated tools for managers, logistics, laboratory and patient monitoring systems

Training

Implementation of the WHO Integrated Management Tools is done through a series of short in-service training workshops. All members of the clinical team attend courses, which are practical and interactive involving the acquisition of skills, clinical experience and expert patient trainers who bring in the ‘voice’ of the patient (see Expert Patient’s Strengthen the Healthcare Team in this section).

Training courses are modular and can be given as needed. Components are currently being modified for distance learning and self-study.

Strengthening the HIV clinical team

The IMAI approach strengthens the HIV healthcare team by:

- creating a multidisciplinary team approach
- including lay healthcare workers and People Living with HIV to expand the team
- task shifting and task sharing

The clinical team is expanded to include lay health workers and people living with HIV and AIDS (PLWHA) and tasks are shared amongst all the available members of the clinical team. All members of the district health network take part in the management of patients including doctors, clinical associates, nurses, lay providers, PLWHA in the facility as well as home based carers and community care workers.

**A vital component throughout this process is ongoing support and mentoring of everyone who is asked to take on additional tasks and responsibilities.**
Strengthening the district health network

Strengthening the district health network is achieved by training district coordinators, providing operational guidance for referrals, strengthening linkages and supply management, assisting with human resources planning and the use of simplified patient monitoring tools. The WHO patient monitoring system consists of interlinked HIV, TB, ANC/PMTCT data collection tools. Routine simplified data collection of essential indicators with facility-based interpretation and quality improvement is supported and enhanced by an annual patient monitoring review.

Community linkages are established between community groups (NGO’s, FBO’s, peer support groups), patients and the Primary Health Care Clinics. These are reinforced with training, patient education materials and operational guidance.

The adapted IMAI tools have thus far been used in three provinces: Eastern Cape, KwaZulu-Natal and Mpumalanga.

Case Study: Eastern Cape

The aim

In 2004, the government of the Eastern Cape decided to expand access to ART.

The change

The change was to implement the HIV component of the World Health Organisation’s (WHO) Integrated Management tools for Adolescents Adult Illnesses (IMAI) focusing on the health system, health workers, patients and communities.

IMAI had already been successfully used in over 37 countries including neighbouring Lesotho and Swaziland.

The change was first implemented in the Eastern Cape in 2004 and has since been implemented in all districts across the Province.

How it works

Modules and training materials were adapted for local use in the Eastern Cape and cover Acute HIV Care, Chronic HIV Care and Palliative Care.

The district HIV co-ordinators’ modules are used for training the trainers (clinical and counselling facilitators and expert patient-trainers (see later in this section)) and for subsequent training of clinicians at primary care sites. After the training, health workers are further supported with ongoing clinical mentoring and supportive supervision.
The outcome

While the training does entail taking staff members out of service for training, health workers feel confident and competent to take on new tasks after their initial training.

All sub-districts in the Eastern Cape have had staff trained in IMAI with over 1000 nurses having been trained with the help of more than 160 expert patient trainers. More than 2000 new patients are initiated on ART every month across the Province and the total number exceeds 82000 with more than 6500 children included.

The WHO integrated management approaches have been built into a nursing curriculum in the Eastern Cape (Lilitha College) and 290 final year learners were orientated to the method before doing their community service.

Possible spread

Senior managers in the provincial health care system in KwaZulu-Natal have expressed interest in implementing IMAI throughout the province and plan to implement the HIV modules of IMAI with additional IMAI modules for the treatment of diabetes, hypertension, mental health conditions and other chronic diseases. Local adaptations of the material are currently being finalised and components are being modified for distance learning and self-study. The full training package will be piloted in Umgungundlovu and after initial assessment will be rolled out to the remaining districts.

KwaZulu-Natal is planning to build IMAI into the undergraduate training curricula of nursing, medical and other allied discipline training to capacitate new graduates.

References:

Contacts:
1. Eastern Cape: Regional Training Centre, Mrs F Mazwi – 043 721 0581, 072 831 4243, telkomsa52092@telkomsa.net
2. KwaZulu-Natal: IMAI project, Centre for Rural Health – 031 260 4967, 082 827 9007, kirstymcharry@gmail.com, penniai@ukwazulu-natal.ac.za, khanyilen1@ukwazulu-natal.ac.za
Task shifting – sharing the clinic workload with lay healthcare workers

Lay workers share the clinic workload and free nurses to nurse

The problem

In Lesotho there are 5 doctors per 100,000 people. In 2000 Maseru district had only 0.71 nurses per 1,000 people compared with 3.9 nurses per 1,000 in South Africa. A 300% increase in nurses was required to adequately cope with the burden of disease in 2002 and the shortfall of nurses is expected to continue to increase as ART is scaled up.

The change

The change was to enlist the support of facility-based lay workers to take over some of the healthcare workers tasks in the HIV/AIDS services at primary health care level.

How it works

*Lay workers take over non-clinical tasks keeping the facility functioning efficiently while nurses are freed to get on with nursing.*

Lay workers in Lesotho took on many functions in the facilities including some clinical tasks such as weighing patients, preparing laboratory forms, filing and recording blood results, and performing HIV rapid tests (see boxes on next two pages).

The Outcome

Benefits of lay health workers

There were many benefits to extending the healthcare team to include lay healthcare workers. The workload of the professional staff was reduced through the process of task sharing.

*The nurses’ time and skills were optimised, more people were able to receive the service, there was more time and better care for patients in need and service delivery was more efficient.*

Peer-to-peer counselling improved treatment literacy for HIV and had a good impact on patient self-management (empowerment) and adherence.

Partners:
Lesotho Department of Health
Selibeng sa Tsepo HIV/AIDS programme
University of the Witswatersrand

Location:
Maseru District, Lesotho
When lay counsellors started in the four busiest facilities in May 2006, HIV testing went from less than 200 to more than 500 a month. HIV testing increased again, from 500 to a thousand, when the second group of lay counsellors started at eight different facilities, and stayed at over a 1,000 every month. The year before, only 1000 clients were tested the whole year.

**Limits & lessons**

While expanding the healthcare team to include lay workers helps significantly to cope within the chronic human resource (HR) shortages, it cannot make up for the shortages and the HR crisis still needs to be addressed.

The limitations of the lay worker must be kept in mind and some tasks should not be shifted to lay/community workers. Quality should not be compromised and task shifting should not become task dumping. Task sharing will get better results.

**Conditions for task-shifting**

*Lay counsellors need on-going mentoring and supportive supervision (by a nurse in charge and a counselling supervisor) and a clear description of duties.*

There should be clear criteria for selection of lay workers and a specific pre-service training curriculum. The status of the lay healthcare worker needs to be consolidated with a career path and a reliable system for payment, time off and benefits.

**Role of lay counsellors and involvement of PLWHAs**

<table>
<thead>
<tr>
<th>Facility level</th>
<th>Community level</th>
</tr>
</thead>
<tbody>
<tr>
<td>General clinic support</td>
<td>General awareness-raising</td>
</tr>
<tr>
<td>HIV testing and counselling (HTC)</td>
<td>Outreach with nurses</td>
</tr>
<tr>
<td>TB education and adherence counselling</td>
<td>Exploring “out of clinic” tasks (esp. for stable patients)</td>
</tr>
<tr>
<td>Support sessions, treatment literacy, empowerment of PLWHAs</td>
<td></td>
</tr>
<tr>
<td>ART preparation and adherence counselling</td>
<td></td>
</tr>
</tbody>
</table>
## In facility tasks of lay healthcare workers in Lesotho

<table>
<thead>
<tr>
<th>General clinic support</th>
<th>HIV testing and counselling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulling files for the day’s appointments (e.g. CD4, Counselling sessions, refills, etc.)</td>
<td>Health talks and group pre-test counselling</td>
</tr>
<tr>
<td>Weighing patients</td>
<td>Routine individual pre-test counselling to pregnant women, TB clients</td>
</tr>
<tr>
<td>Compiling and “triaging” patient visits (e.g. blood, refill, consult, urgent, walk-in, Counselling session, HIV Counselling and Testing, etc.)</td>
<td>TB and STI screening</td>
</tr>
<tr>
<td>Filling out lab request forms for CD4, sputum</td>
<td>Administering HIV rapid tests</td>
</tr>
<tr>
<td>Filing and recording lab results</td>
<td>Individual post-test counselling</td>
</tr>
<tr>
<td>Maintaining folder and card systems</td>
<td>Referral to nurse for staging, booking appointments for baseline labs</td>
</tr>
<tr>
<td>Entering info in registers (HIV/TB)</td>
<td>Enrolling clients in HIV care</td>
</tr>
<tr>
<td>Monthly statistics (HTC)</td>
<td>Basic HIV/AIDS education</td>
</tr>
<tr>
<td>Basic HIV/AIDS education (HIV transmission, HIV lifecycle, disease progression, etc.)</td>
<td>Prevention education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support sessions, treatment literacy &amp; empowerment of PLWHAs</th>
<th>ART preparation &amp; adherence counselling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulling files for the day’s appointments (e.g. CD4, Counselling sessions, refills, etc.)</td>
<td>Preparatory counselling</td>
</tr>
<tr>
<td>Weighing patients</td>
<td>Potential barriers to adherence</td>
</tr>
<tr>
<td>Compiling and “triaging” patient visits (e.g. blood, refill, consult, urgent, walk-in, Counselling session, HIV Counselling and Testing, etc.)</td>
<td>Treatment supporter</td>
</tr>
<tr>
<td>Filling out lab request forms for CD4, sputum</td>
<td>Importance of adherence</td>
</tr>
<tr>
<td>Filing and recording lab results</td>
<td>Side effects (what to expect, how to manage)</td>
</tr>
<tr>
<td>Maintaining folder and card systems</td>
<td>Assessment of treatment readiness</td>
</tr>
<tr>
<td>Entering info in registers (HIV/TB)</td>
<td>Use of the pill box</td>
</tr>
<tr>
<td>Monthly statistics (HTC)</td>
<td>Appointments: refills, lab tests, etc.</td>
</tr>
<tr>
<td>Basic HIV/AIDS education (HIV transmission, HIV lifecycle, disease progression, etc.)</td>
<td>Follow-up counselling</td>
</tr>
<tr>
<td>Immune system and CD4</td>
<td>Defaulter tracing</td>
</tr>
<tr>
<td>Opportunistic infections</td>
<td>Screening for people on ART over 6 months (routine monitoring tests, referral to nurse if needed)</td>
</tr>
<tr>
<td>WHO staging</td>
<td>TB health talks and outreach</td>
</tr>
<tr>
<td>ART</td>
<td>Drug refills</td>
</tr>
<tr>
<td>Principles</td>
<td>Ensuring prescription and adherence to cotrimoxazole</td>
</tr>
<tr>
<td>Classes</td>
<td></td>
</tr>
<tr>
<td>Side effects</td>
<td></td>
</tr>
<tr>
<td>Importance of adherence</td>
<td></td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
</tr>
<tr>
<td>Male/female condom distribution</td>
<td></td>
</tr>
<tr>
<td>PEP</td>
<td></td>
</tr>
<tr>
<td>PMTCT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support sessions, treatment literacy &amp; empowerment of PLWHAs</th>
<th>ART preparation &amp; adherence counselling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulling files for the day’s appointments (e.g. CD4, Counselling sessions, refills, etc.)</td>
<td>Preparatory counselling</td>
</tr>
<tr>
<td>Weighing patients</td>
<td>Potential barriers to adherence</td>
</tr>
<tr>
<td>Compiling and “triaging” patient visits (e.g. blood, refill, consult, urgent, walk-in, Counselling session, HIV Counselling and Testing, etc.)</td>
<td>Treatment supporter</td>
</tr>
<tr>
<td>Filling out lab request forms for CD4, sputum</td>
<td>Importance of adherence</td>
</tr>
<tr>
<td>Filing and recording lab results</td>
<td>Side effects (what to expect, how to manage)</td>
</tr>
<tr>
<td>Maintaining folder and card systems</td>
<td>Assessment of treatment readiness</td>
</tr>
<tr>
<td>Entering info in registers (HIV/TB)</td>
<td>Use of the pill box</td>
</tr>
<tr>
<td>Monthly statistics (HTC)</td>
<td>Appointments: refills, lab tests, etc.</td>
</tr>
<tr>
<td>Basic HIV/AIDS education (HIV transmission, HIV lifecycle, disease progression, etc.)</td>
<td>Follow-up counselling</td>
</tr>
<tr>
<td>Immune system and CD4</td>
<td>Defaulter tracing</td>
</tr>
<tr>
<td>Opportunistic infections</td>
<td>Screening for people on ART over 6 months (routine monitoring tests, referral to nurse if needed)</td>
</tr>
<tr>
<td>WHO staging</td>
<td>TB health talks and outreach</td>
</tr>
<tr>
<td>ART</td>
<td>Drug refills</td>
</tr>
<tr>
<td>Principles</td>
<td>Ensuring prescription and adherence to cotrimoxazole</td>
</tr>
<tr>
<td>Classes</td>
<td></td>
</tr>
<tr>
<td>Side effects</td>
<td></td>
</tr>
<tr>
<td>Importance of adherence</td>
<td></td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
</tr>
<tr>
<td>Male/female condom distribution</td>
<td></td>
</tr>
<tr>
<td>PEP</td>
<td></td>
</tr>
<tr>
<td>PMTCT</td>
<td></td>
</tr>
</tbody>
</table>
References:
3. Edited from presentation, Sharonann Lynch Task-shifting & role of lay workers, PLWHA in delivering HIV/AIDS care and treatment in Lesotho 22 August 2007 Approaches to service provision for universal access University of Witwatersrand

Contact:
Sharonanne Lynch – sharonann.lynch@newyork.msf.org
‘Expert patient trainers’ strengthen the healthcare team

Patients help train healthcare workers in HIV consultation

The problem
Just as clinicians are experts in clinical care, people living with HIV are experts on their experience of the illness. The patient’s experience of both the illness and of their interactions with the healthcare system can complement the clinical perspective on care can help improve healthcare delivery. The role of patients on the care team is well documented in both developed countries and resource-poor settings.  

The change
The change was to recruit and train people living with HIV and AIDS (PLWHA) to contribute to the training of healthcare workers.

The model is part of the IAMI (Integrated Management for Adolescents and Adults) training for nurse-managed HIV and ART care in the Eastern Cape (see Integrating HIV/AIDS into General Care in this section)

How it works
Patients are recruited from accredited ART sites, and trained to become “Expert Patient Trainers”.

They participate in the training of clinical healthcare workers through a structured process of role-playing in which Expert Patient Trainers (EPT) play the role of the patient allowing healthcare workers to practice their HIV/AIDS consultation skills. The role plays occur one-on-one and the EPT is trained to give feedback on various aspects of the consultation using a structured feedback form (see sample role play and feedback form below). This learning experience allows healthcare workers to identify strengths and weaknesses in their HIV consultation skills. Role-plays increase in complexity as the course proceeds.

The training of the EPTs comprises a three-day course where they learn about the symptoms of HIV and how to role play a patient, what to expect from a thorough consultation for HIV (eg screening for STIs, TB, contraception, safe sex, staging and whether cotrimoxazole or ART is needed), how to assess the consultation using a structured feedback form, and how to give constructive feedback. Each role play is
Tried & Tested: Models for the scale up of HIV prevention, treatment and care from South Africa and beyond

Carefully structured and the assessments of the consultation is specific to each role play.

The training and use of the EPTs supports the HIV/AIDS clinical training module in the IMAI course.

The outcome

Many health workers were at first reluctant to work with EPTs, but soon realized that improved knowledge and communication skills would lead to improved adherence among their patients, decreased loss to follow-up and increased access to ART.

*EPTs have been found to increase confidence and competence of the participants as well as to decrease stigma and improve health worker perceptions.*

The success of this training has prompted experts in Eastern Cape to recommend the use of EPTs as “an integral part of both clinical and training teams” when dealing with a variety of chronic conditions, and that training programmes for pre-service curricula in South Africa be revised to reduce “gaps between service providers and clients.”

More than 160 EPTs have been trained in the Eastern Cape and most EPTs have been employed as Lay Counsellors in primary health care facilities adding value to the clinical team.

Ways that clients can contribute to HIV care systems:

- assist with tasks at the clinic
- provide health education on HIV at clinics
- lead support groups
- train as an HIV counsellor
- become a ‘treatment buddy’ for a friend
- become a member of an outreach team providing education door-to-door
- train as a community healthcare worker to support patients on ART in the community
- share their story during outreach days and community events
- share their story and experience of healthcare during workshops and trainings
- train as an ‘Expert Patient Trainer’ to support training of clinicians
- provide feedback to clinic staff
- become a member of a quality improvement team in the clinic
Example of a Case Study for Role Playing

Case 1

You are a 27 year-old HIV + woman. This is your first visit to the clinic. You tell the health worker that you are married and come today because you and your husband would like to start a family.

If asked:

- You are HIV+, tested 7 months ago
- You do not take any medications
- You have no symptoms
- You are not employed but keep house for your husband and yourself
- Your last menstrual period was 2 weeks ago
- You have been practicing safer sex
- You and your husband are now regularly using condoms
- You have disclosed your status to your husband, but he does not want to be tested
References:

Contacts:
1. Eastern Cape: Regional Training Centre – Mrs F Mazwi 043 721 0581, 072 831 4243, telkomsa52092@telkomsa.net
2. KwaZulu-Natal: IMAI project, Centre for Rural Health – 031 260 4967, 082 827 9007, kirstymcharry@gmail.com, pennnial@ukwaZulu-Natal.ac.za, khanyilen1@ukwaZulu-Natal.ac.za
On the next page you will find a template for writing up your own “Tried & Tested” success stories to share with colleagues.
<table>
<thead>
<tr>
<th>Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub title:</td>
</tr>
<tr>
<td>Partners:</td>
</tr>
<tr>
<td>Location:</td>
</tr>
<tr>
<td>Funders:</td>
</tr>
</tbody>
</table>

The problem

The change
### How it works


### Results


### Reference:


### Contact:
