Evaluating outcomes of Patients loss to follow up in large HIV care and treatment programs in Africa.

A snap short from the 2018 International AIDS conference

By
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Country Director

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WCH Chapel
About the Society for Family Health (SFH)

• SFH is local public health NGO, registered Trust since 1997.
• 9 regional offices
• Staff establishment of 41
• Over 200 community health workers
Presentation outline

1. Session Objectives
2. Overview on HIV, treatment and global response
3. Where Namibia stands with the 90-90-90 targets
4. Case study: Evaluating outcomes of Patients loss to follow up in large HIV care and treatment programs in Africa
Session Objectives

- To provide an overview on the global HIV epidemic response
- To provide an overview of Namibia’s progress towards 90-90-90 targets
- Discuss and share lessons learned: Evaluating outcomes of patients lost follow up in care and treatment programs in Africa
About the International AIDS conference

- The 22nd International AIDS Conference (AIDS 2018) was held in Amsterdam, the Netherlands from 23-27 July 2018.
- The theme of AIDS 2018 conference was “Braking Barriers and Building Bridges”.
- IAS conference is one of the two world’s most prestigious HIV conferences organized by International AIDS Society (IAS).
- The conference provides an opportunity to share new scientific evidences that can inform response to the epidemic by featuring topics on sexual and reproductive health, HIV prevention, treatment, access to care, stigma, discrimination and human rights violations, priority and high risk populations, community involvement etc.
Good Practice Statement (WHO, 2018)

ART initiation should follow the overarching principles:
• Providing people-centered care.
• Care should be focused and organized around the health needs, preferences and expectations of people and communities,
• Upholding individual dignity and respect, especially for vulnerable populations,
• Promote engagement and support of people and families to play an active role in their own care through informed decision-making.
• No coercion to start ART immediately
• should be supported in making an informed choice regarding when to start ART and what ARV drug regimen to use.
HIV a tricky virus

- Instead of HIV being destroyed by the immune system it uses immune cells to reproduce.
- CD4 cells are the immune cells that fight viruses and infections. But instead of clearing HIV, CD4 cells are used by HIV to make more copies of itself.
The natural history of HIV refers to what happens after infection before ART is used. It is explained by results from two blood tests:

- **The **CD4 count** is a marker of how much HIV damages your immune system. Without ART, CD4 counts steadily go down over time in most people.**

- **Viral load** shows how much virus is circulating in the body, measured in blood. Without ART viral load steadily goes up over time.
Natural history of HIV without ART
U=U

- Unequivocal proof that people living with HIV who are on treatment and maintain an **undetectable** viral load do not transmit the virus during sex.
- **Undetectable Equals Untransmittable**, (U=U)

Non-nucleoside reverse transcriptase inhibitors (NNRTIs) and nucleoside reverse transcriptase inhibitors (NRTIs)

- A nucleoside is the building block to our DNA and RNA. DNA is the genetic code which makes us what we are.
- DNA determines if we have blue eyes what we look like and to some people, if we are susceptible to any genetic medical conditions.
- Our body is constantly renewing itself and making new cells. To do this the DNA (double-stranded) splits apart to become RNA (single-stranded).
- It is a bit like a zip opening: The single-stranded RNA then goes on to become the proteins that make up our skin, organs, hair, nails etc.
- HIV alone is not able to replicate. It has to put its own genetic material into our genetic material so that we can replicate the parts of the virus ourselves.
- HIV only contains RNA and so needs to change its RNA into DNA to be able to integrate with our DNA for replication.
- To do this it has to first change its RNA to DNA. HIV uses a compound called **reverse transcriptase to convert its RNA to DNA.**
Without reverse transcriptase HIV cannot replicate so it is a good target for anti-HIV drugs.

Both the NRTIs and the NNRTIs interact with the reverse transcriptase to stop it working. This stops HIV replicating so the amount of virus in the body will go down.

The difference between NNRTIs and NRTIs is how they stop reverse transcriptase from working.

NRTIs work in different ways but one of the main ways is to compete with reverse transcriptase for their interaction site with HIV genetic material.

NNRTIs work by sitting in a binding site in the virus structure
Active Vs Sleeping CD4 cells

- Most of our CD4 cells are usually resting and this is healthy. This part of our immune system is like a huge reference library with thousands of books on the shelves, not being read, but waiting for when they are needed.
- Each book is like an immune response that the body developed earlier that is stored away to be quickly activated if it is needed in the future.
- Throughout life, the library continues to grow. The body produces new CD4 cells which in turn are primed to respond to an infection – and then they sleep.
- Some of these cells can also sleep for decades. But they can also wake up at any time and the timing is not predictable. This is one reason why ART needs to be taken every day.
- This is also why viral load generally rebounds if ART is stopped – even after many years on treatment.
WHO caution on using a dolutegravir-based regimen

- Dolutegravir (DTG) is a drug used to treat HIV infection. DTG is one of several antiretrovirals included in the “integrase inhibitor” drug class
- Recommended as the preferred first-line regimen for people living with HIV initiating ART
- Note of caution on using DTG during the periconception period among women and adolescent girls of childbearing
- Potential Exposure to DTG at the time of conception may be associated with neural tube defects among infants.
- DTG appears to be safe when started later in pregnancy: after the period of risk of neural tube defects, after the first trimester.
- Adolescent girls and women of childbearing potential who do not currently want to become pregnant can receive DTG together with consistent and reliable contraception;
- Hormonal contraception and DTG have not reported or expected drug interactions although data are limited.
Why DTG?

- DTG is associated with fewer drug interactions, has a higher genetic barrier to resistance, and is being launched as a low-cost, once-daily generic formulation for low- and middle-income countries.
- Dolutegravir (DTG) is a drug used to treat HIV infection. DTG is one of several antiretrovirals included in the “integrase inhibitor” drug class. DTG, when combined with 2 other medicines in a single fixed-dose combination pill, is considered to be among the best current treatments for HIV, but its availability has previously been limited due to high cost.
- However, the predicted price reductions announced today for the fixed-dose combination of tenofovir/lamivudine/dolutegravir (TLD) to an average price of US$ 75 per patient per year will make DTG-containing ARV treatment regimens affordable for many low- and middle-income countries.
By 2020...

- 90% of all people living with HIV will know their HIV status.
- 90% of all people diagnosed with HIV will receive sustained antiretroviral therapy.
- 90% of all people receiving antiretroviral therapy will have durable suppression.
## High coverage in high-prevalence countries

*Proportions of pregnant HIV-positive women in priority countries receiving antiretroviral medicines to prevent mother-to-child transmission, 2017*

<table>
<thead>
<tr>
<th>90+%</th>
<th>70–89%</th>
<th>50–69%</th>
<th>&lt;50%</th>
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<tbody>
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<td>Botswana</td>
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<td>Chad</td>
<td>Angola</td>
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<td>Zimbabwe</td>
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Source: UNAIDS 2018 estimates.
Countries that have achieved the 90–90–90 targets or are near to achieving them, most recent country data*

<table>
<thead>
<tr>
<th>First 90</th>
<th>Second 90</th>
<th>Third 90</th>
<th>Viral load suppression among all people living with HIV</th>
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<tbody>
<tr>
<td>Achieved (90% or greater)</td>
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<td>Botswana</td>
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<td>Lao People’s Democratic Republic</td>
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<td>Zimbabwe</td>
<td>Nearly achieved (85–89%)</td>
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<td>(85–89%)</td>
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<td>Eswatini</td>
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* Data are for 2017, except as follows: 2016: Austria, Czechia, Denmark, Germany, Italy, Luxembourg, Netherlands, Portugal, Serbia, Slovenia. 2015: Croatia and Hungary. Estimates are for citizens of the country only for Kuwait and Saudi Arabia.

Source: UNAIDS special analysis, 2018; see annex on methods for more details.
Remarkable progress on HIV testing and treatment

Progress towards 90–90–90, global, 2017

- **75%** [55–92%] of people living with HIV know their status
- **79%** [60–>95%] of people living with HIV who know their status are on treatment
- **81%** [59–>95%] of people on treatment are virally suppressed

HIV testing and treatment cascade, global, 2017

- Gap to reaching the first 90: 5.7 million
- Gap to reaching the first and second 90s: 8.2 million
- Gap to reaching the three 90s: 9.4 million

Source: UNAIDS special analysis, 2018; see annex on methods for more details.
NAMIBIA POPULATION-BASED HIV IMPACT ASSESSMENT (NAMPHIA) 2017
Progress to 90-90-90 by Sex (adjusted for detectable ARVs)

- **Female**
  - Diagnosed: 89.5%
  - On Treatment: 97.1%
  - Virally Suppressed: 92.2%

- **Male**
  - Diagnosed: 79.6%
  - On Treatment: 94.9%
  - Virally Suppressed: 89.5%

- **Total**
  - Diagnosed: 86.0%
  - On Treatment: 96.4%
  - Virally Suppressed: 91.3%
NAMPHIA 2017:
Progress to 90-90-90 by Age (15-64)
Viral Load Suppression Among All* PLHIV

![VLS Prevalence among PLHIV (%)](image)

- **Namibia (15-64)**
  - Male: 69.6%
  - Female: 81.7%
  - Total: 77.4%

* Denominator is all PLHIV with viral load results (irrespective of awareness of HIV-positive status and ART status)
VLS by Age and Sex

VLS Prevalence among PLHIV (%)

![Bar chart](chart.png)

- **15-24**
  - Male: 60.7%
  - Female: 65.4%
- **25-34**
  - Male: 50.5%
  - Female: 76.5%
- **35-44**
  - Male: 71.2%
  - Female: 84.0%
- **45-54**
  - Male: 78.8%
  - Female: 87.4%
- **55-64**
  - Male: 86.3%
  - Female: 92.5%

**Legend**

- Male
- Female

**Age (years)**

0 10 20 30 40 50 60 70 80 90 100

**VLS Prevalence among PLHIV (%)**
Evaluating outcomes of Patients loss to follow up in large HIV care and treatment programs in Africa

Case study

B. Rachlis, et al
Introduction (1) (Kenya case study)

B. Rachlis et al,

- Disruption in HIV care through missed visits/appointments can undermine clinical outcomes
- Retention in HIV care programs remains a major challenge across setting
- The dynamic complexities individuals face during the course of their HIV care (e.g., logistical challenges) can impact upon their ability to return to the clinic for scheduled follow-up visits.
- It places individuals at high-risk for disease progression, drug resistance and death
- At the same time, program planners remain uncertain about how and where to direct outreach and return-to-care efforts
Patient tracing through outreach activities is commonly used to track individuals who miss scheduled visits, in order to determine their status and encourage their return to care.

In spite of increasing numbers of individuals in HIV care and on ART, health worker shortages, organizational challenges and high costs continue to limit the ability of HIV programs to trace all patients who are missing or LTFU.
Loss to Follow Up (LTFU)

- LTFU was defined as absence from clinic, without known death or transfer to another facility, for at least 3 months since last scheduled visit.
Results

• Of the 14,811 patients identified as LTFU during the study period, 2,540 were randomly selected for tracing including 2,179 (85.8%) adults and 361 (14.2%) children. A total of n=1,071 (42%) were on ART. The median time on ART was 432 days.

• Over 70% of all patients in this study (n=1,800) were successfully traced and outcomes could be determined for 85% of those who were physically traced.

• Of those successfully traced, 881/1,800 (49%) had their whereabouts obtained via an informant whereas 919/1,800 (51%) patients were communicated with directly.
Reasons for disengaging from care

• The most commonly reported reasons why patients disengaged from care were: felt well so didn't need care (n=140 patients), transport was too difficult or expensive (n=84 patients), work or need for money interfered with picking up medicine (n=64 patients).

• A higher proportion of adults reported staff not being nice as a reason for disengaging from care compared to children (10.3% vs. 0%).
Discussion (1)

• Identified outcomes for 71% of sampled patients initially identified as being LTFU and 85% of those physically traced.

• These findings suggest that a large scale sampling-based outreach program can be both feasible and effective in locating patients suspected of being LTFU and determining their status.

• Of those with known outcomes, 21% had died while another 25% of patients were not actually LTFU and still were receiving care within AMPATH or elsewhere.
Discussion (2)

• Findings reinforce the challenges associated with obtaining and maintaining up-to-date information on the locations and status of patients who miss their scheduled visits.
  – poor documentation was amongst the top reasons for explaining why patients may become LTFU

• As successful outreach can lead to increased “re-engagement with care” (33), accurate information on patient locations is needed to ensure patients can actually be found.
  – 85% of the individuals confirmed to be LTFU could be physically traced
Discussion (3)

• Stigma and fear of disclosure was reported as a reason for disengagement with fear of scolding and mistreatment by healthcare staff and family influences being particularly important.

• Poor patient-provider relationships are an important reason why individuals choose to disengage from care.

• Frustrations with the healthcare they receive and the use of exposing language that essentially ‘outs’ their positive HIV status to others in the clinic have been previously reasons for become LTFU.
Thank you