HIV control in Rwanda: Lessons and challenges

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Country Profile

- **Landlocked** East Africa nation,
- 26,388Km²:
- ~11.5 M, highest pop. density in Africa: 416 ppl./km²
- Life expectancy at birth m/f (years, 2013): 64/67
- HIV prevalence: 3%

A Hilly Terrain a.k.a
“A country of a Thousand Hills and thousand solutions

Controlling the HIV epidemic with antiretrovirals
Having the Courage of Our Convictions
New HIV infection & AIDS related deaths in Rwanda

HIV incidence (2004 to 2014)
New infections reduced by 50%.

HIV Related deaths (2014)
78% decline in overall AIDS related deaths (2004 to 2014)

Source: UNAIDS epi spectrum & RBC annual reports
Few years ago ...

Saving lives with Free Treatment for HIV Infection and Tuberculosis

Before

March 2003

After

September 2003

Reduction of HIV Prevalence among youth

RAIHIS : Rwanda AIDS Indicators and HIV Incidence survey
HIV prevalence in Rwanda is 3%, BUT...

National Average: 3%
Male: 2.3%
Female: 3.6%

- Even in Kigali, disparity of prevalence
- High pockets of HIV prevalence: FSWs: 51% (BSS2010)

Source: Rwanda Demography Health Survey (DHS), 2010
FSW: HIV Core Transmitters in Rwanda

Core transmitters (Highest prevalence)

51%

Bridging Population (Moderate prevalence)

General Population (Lowest prevalence)
Patients on ART & Patients tested HIV+

### Patients on ART

<table>
<thead>
<tr>
<th>Year</th>
<th>Patients on ART</th>
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<td>2004</td>
<td>5730</td>
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</tbody>
</table>

### New HIV positive cases

Source: RBC, HMIS 2015
Effect of ART coverage on HIV prevention

Year over year reduction associated with every 10% increase in ART coverage results into 6% incidence reduction.

Source: S. nsanzimana, E. mills & al. abstract, feb. CROI 2015, Seattle, USA
New infections ~ 10,000

All HIV Infected 210,000

Deaths: ~ 5000

Treatment as Prevention (TasP)
*McMahon et al. 2015, estimates for LMIC for intention-to-treat*
Rwanda’s Progress Towards 90-90-90

- HIV Positive people: 210,000
- Diagnosed: 86%
- On ART: 85%
- VL suppressed (< 40 copies /ml): 82%

References:
2. Drug Resistance Monitoring in selected sites, 2013
3. HMIS, June 2015
Target coverage in HIV program

Under test and treat

90-90-90 Target of 90% of PLHIV know their status

Aim to enroll ~36,000 people on ART, mainly from current Pre-ART patients

- Enroll on ART
- Already on ART
- HIV+, not enrolled

Sources: ¹TracNET data on current program enrollment
WHO recommends to treat all HIV+
What next?

- How much?
- Can we afford?
- How can we operationalize the new recommendations?
- How can we retain patients in care (especially healthy patients)?
- How can we measure the benefits and impact?
Can Rwanda afford Test and Treat?

What are the benefits?
Early analysis shows in Rwanda, Test & Treat could bring an additional \textbf{8\%} of patients on treatment, with a \textbf{5\%} increase in funding need.

\begin{itemize}
  \item Patient Numbers in 2020 at 95\% coverage:
    \begin{itemize}
      \item 2013 Guidelines: 256,522
      \item Universal Treatment: 257,842
    \end{itemize}
  \item Cost of ART in 2020 at 95\% coverage:
    \begin{itemize}
      \item Ind costs
      \item personnel
      \item Lab
      \item ARVs
\end{itemize}
\end{itemize}

\textit{Source:} \textsuperscript{1} Epi Estimate RBC, 2014
Early analysis into Universal Treatment in Rwanda suggests a reduction in the number of PLHIV by 2020

Epi Estimates of PLHIV under 2013 Guidelines vs Universal Treatment

Source: 1 Epi Estimates RBC, 2014
By adopting Test and Treat, Rwanda may be able to avert 17,800 more infections than under the 2013 Guidelines.

Incremental Cost and Impact of Moving from 2013 Guidelines to Universal Treatment

Average additional annual costs for ARVs and labs = $1.4 million p.a

Additional Infections Averted by Scaling Up 17,800

SAVING:
$1st line ARV costs for 17,800 people = $3.5 million a year
Challenges remaining

Funding reduction to support programs:
~40% of external HIV funding declined in 4 years mainly from the GF and PEPFAR is a major barrier to end AIDS

Conclusion

It is possible to see the end of AIDS from Rwanda
- With strategic use of resources
- Simplifications of models of care
- Ending AIDS is no longer dream
“La bataille n’est pas encore finie”
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The courage of our convictions