Southern African HIV Clinicians Society

3rd Biennial Conference

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Sandton Convention Centre
Johannesburg

Our Issues, Our Drugs, Our Patients

www.sahivsoc.org
www.sahivsoc2016.co.za
Can we treat our way out of the epidemic?

Francesca Conradie
Southern African HIV Clinicians Society
Overview

• Have we ever managed to treat our way our an epidemic?
• The Science
• 90 90 90
  – Know their status
  – Started on treatment
  – Viral load undetectable
Have we ever managed to treat our way our an epidemic

• Use of INH in the Eskimo population in Alaska

Abstract
As a result of numerous trials, isoniazid prophylaxis was shown to be effective in preventing tuberculosis in many different populations and under a variety of conditions. However, the duration of the protective effect has been of some concern. In a previous report, the protective effect of isoniazid prophylaxis among Alaskan Eskimos was shown to persist through the fifteenth year after its administration. In this final report, the protective effect is shown to persist for more than 19 years. The magnitude of the effect is related to the amount of isoniazid taken. The results of the study are consistent with the hypothesis that the decrease in risk of tuberculosis produced by isoniazid preventive therapy is lifelong.
Universal voluntary HIV testing with immediate antiretroviral therapy as a strategy for elimination of HIV transmission: a mathematical model

Reuben M Granich, Charles F Gilles, Christopher Dye, Kevin M De Cock, Brian G Williams
Reducing $R_o$ impacts HIV Incidence
Prevention of HIV-1 Infection with Early Antiretroviral Therapy

Myron S. Cohen, M.D., Ying Q. Chen, Ph.D., Marybeth McCauley, M.P.H.,
Theresa Gamble, Ph.D., Mina C. Hosseinipour, M.D.,
Nagalingeswaran Namaratnam, M.B., B.S., James G. Halim, M.D.,
Johnstone Nkemenda, F.R.C.P., Beatriz Grinsztejn, M.D., Jose H.S. Klutzo, M.D.,
Sheila V. Godbole, M.D., Sanjay Mehendale, M.D., Suwad Charityalsai, M.D.,
Breno R. Santos, M.D., Kenneth H. Mayer, M.D., Irving F. Hoffman, P.A.,
Susan H. Estelman, M.D., Estelle Knovar-Manning, M.T., Lei Wang, Ph.D.,
Joseph Malihama, F.R.C.P., Lisa A. Mills, M.D., Guy de Bruijn, M.B., B.Ch.,
Jan Sanne, M.B., B.Ch., Joseph Eron, M.D., Joel Gallant, M.D.,
Diane Havir, M.D., Susan Swindells, M.B., B.S., Heather Ribaudo, Ph.D.,
Vanessa Bharara, M.D., David Burns, M.D., Tahia E. Tahia, M.B., B.S.,
Karim Nidsen-Saines, M.D., David Celentano, Sc.D., Max Essex, D.V.M.,
and Thomas R. Fleming, Ph.D., for the HPTN 052 Study Team"
HPTN 052

Total HIV-1 Transmission Events: 39

Immediate Arm 4

Delayed Arm 35

96% Reduction with Early ART

p < 0.0001

Cohen, NEJM 2011;365:492-505
HPTN 052

HR = 0.37 or 96.3% reduction in transmission
90% of all living with HIV will know their HIV status
90% of all living with HIV will receive sustained antiretroviral therapy
90% of all receiving antiretroviral therapy will have durable viral suppression
Testing (the first 90)

- Currently facility based
- Offered between 9am and 2pm
- PICT
- How often?
- Men are "left out"
What are the alternatives?

• Home based testing
• Self testing
http://journals.plos.org/plosmedicine/article?id=info:doi/10.1371/journal.pmed.1001351
Linkage to care following a home-based HIV counselling and testing intervention in rural South Africa

Reshma Naik⁵,¹,²,³, Tanya Doherty¹,⁴, Debra Jackson⁴, Hanani Tabana¹,⁵,⁶, Sonja Swanevelder⁷, Donald M Thea²,⁸, Frank G Feeley²,⁸ and Matthew P Fox⁸,⁹

⁵Corresponding author: Reshma Naik, Population Reference Bureau, 1875 Connecticut Avenue NW Suite 520, Washington, DC 20009, USA. (reshnaik@gmail.com)
Linkage to care following HBHCT (N=196)

Cumulative linkage to care

Time since HBHCT (days)

Number at risk

196
50
17
4
0

3 months
Self testing
Self testing
Self testing
WHO Prequalification: Sample Product Dossier for an IVD intended for HIV self-testing

SIMUTM self-test for HIV 120
PQDx5432-98-00
THE Manufacturing Company

DRAFT DOSSIER FOR PUBLIC COMMENT
HIV self testing

• Research is needed
• Untrained users to be observed
• Can be sold in South Africa
  – Available on-line
  – In the airport
90% on treatment

• Linkage to care

Linkage to HIV Care and Antiretroviral Therapy in Cape Town, South Africa

Katharina Kranzer, Jennifer Zeinecker, Philip Ginsberg, Catherine Orrell, Nosindiso N. Kalawe, Stephen D. Lawn, Linda-Gail Bekker, Robin Wood

Published: November 2, 2010 • http://dx.doi.org/10.1371/journal.pone.0013801
Figure 1. Number of clients testing HIV+, with timely CD4 counts, eligible for ART and initiating ART estimated using proportions from table 2.

http://journals.plos.org/plosone/article?id=info:doi/10.1371/journal.pone.0013801
What if we use scare tactics?

• Point of care CD4+ count
<table>
<thead>
<tr>
<th>Step in the care cascade</th>
<th>Studies</th>
<th>Odds ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV testing to CD4 testing</td>
<td>2</td>
<td>4.10 (3.50, 4.90)</td>
</tr>
<tr>
<td>CD4 testing to receipt of result</td>
<td>4</td>
<td>2.80 (1.50, 5.60)</td>
</tr>
<tr>
<td>CD4 to ART initiation</td>
<td>6</td>
<td>1.80 (1.10, 2.90)</td>
</tr>
<tr>
<td>ART initiation among eligible patients</td>
<td>4</td>
<td>0.98 (0.80, 1.30)</td>
</tr>
</tbody>
</table>
Retention in care

Figure 1. Average retention at specified time points, by region*

* Note: Y axis starts at 40%

Fox MP, Rosen S, Retention of Adult Patients on Antiretroviral Therapy in Low- and Middle-Income Countries: Systematic Review and Meta-analysis 2008-2013, J Acquir Immune Defic Syndr. 2015 May
Third 90: Percentage of HIV+ people with HIV RNA suppression

Target 3: 73% of all HIV+ people with HIV RNA Suppression

Code: MOAD01, MOAD0102
Title: 90-90-90: Delivering on the Targets
Date: Monday, 20 July 2015
Time: 16:30-18:00
Room: Ballroom C-D
Retention in care

National: Percentage of adults remaining on ART, by duration and year started ART

- FY 2004/05
- FY 2005/06
- FY 2006/07
- FY 2007/08
- FY 2008/09
- FY 2009/10
- FY 2010/11
- FY 2011/12
- FY 2012/13
- FY 2013/14

Source: Consolidated National report covering monthly and quarterly ART data to end March 2014

Thanks: Andrew Boulle
48 month retention includes 48 month retention (sometimes interpolated) for all cohorts reporting beyond 48 months.
SA data on VLs

• Thanks: Sergio Carmona, NHLS
Our current first line

- TDF FTC and EFV
- Low barrier to resistance
- Unforgiving of the patient or the health care system
- What if we had a better one?
Can we treat our way out of the epidemic?
Not with our current testing strategy
Not with our current linkage to care
Not with our current first line