



Gary S. Reiter, MD & Andrew Kaplan, MD - Memorial Lecture

Lifetime Adherence: The Role of the Provider in Maximizing the Odds of HIV Treatment Success

Gerald Friedland MD

Yale University School of Medicine

Adherence 2018 • June 8-10 • Miami



Gary Reiter MD & Andrew Kaplan, MD



Gary Reiter provided HIV care both as a front line caring and compassionate clinician and as a hospital administrator. He established the first HIV/AIDS clinic for people living with HIV in an underserved semi urban and rural population in Western Massachusetts. (1955-2003)



Andy Kaplan, was on the faculty at the University of North Carolina and UCLA as a wonderful clinician, teacher and creative and committed HIV molecular virologist. Along with other accomplishments, he was among the first to describe protease inhibitor mutations. (1959-2006)

Lifetime Adherence: The Role of the Provider in Maximizing the Odds of HIV Treatment Success

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- **Expanding the definition of provider**
- **Adherence and maximizing and broadening HIV treatment success**
 - The importance of TRUST
 - Reaching the “hard to reach”
 - Challenges in HIV pandemic
 - Co-morbidities
 - Aging
- **Lifetime providers’ adherence?**
 - Passing the baton



Expanding the definition of Provider

AIDS as a teacher

1. Compassion
2. Competence
3. Comprehensiveness
4. Co-morbidities
5. Continuity
6. Colleagues
7. Courage
8. Creating new knowledge
9. Combinations
10. Community-Activism
11. Cost-effectiveness





Who are the providers?

- Providers are all with direct contact with PLWH or at risk, including:

Prevention, Care and Treatment

doctors

nurses

social workers

pharmacists

community health workers

mental health workers

substance use counselors

clergy

family members and loved ones

Peers

lawyers

activists



Multidisciplinary colleagues and collaboration

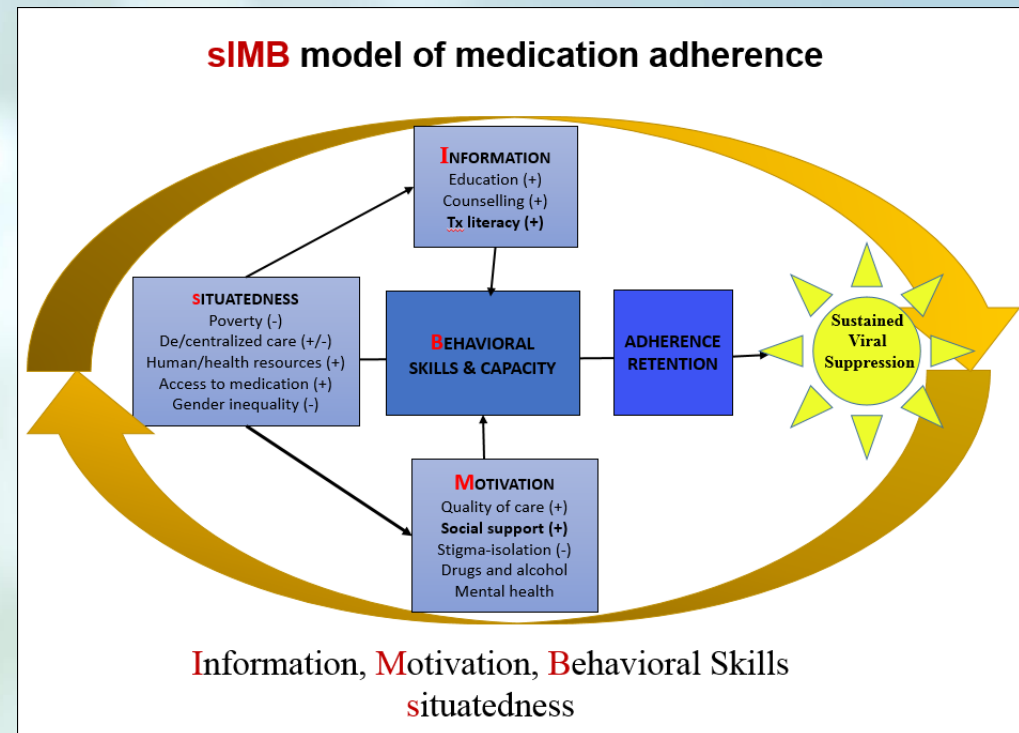


2nd International Conference on HIV Treatment Adherence

Hyatt Regency Hotel, Jersey City, NJ, USA

Wednesday, March 28, 2007

- HIV Treatment Adherence:
- The Intersection of Biomedical, Behavioral, and Social Science Research with Clinical Practice





Who are the providers?

- **How many remember the exact time and place and first person living with HIV that you encountered as a provider?**
- **What are the personal characteristics that have defined and attracted providers (all of us) to work in and with HIV/AIDS?**
Qualities of humanism, empathy, equity, social justice, human rights,
intellectual challenge and responsibility
(Camus, “simple human decency”)
- **The response to HIV/AIDS can serve as a model for other diseases and epidemics.**
 - **Including those that are now infecting our political and national life**

Providers ALL



Maximizing and Broadening Treatment Success

Trust

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Project TRUST



- Incarcerated men and women 10% of PLWH in CT
- PLWH prisoners eligible for ART recruited in 1996
- Acceptance and adherence by self-report and pharmacy
Clinical information obtained from chart review
- Adherence defined as having taken 80% of ART.
- Acceptance (80%) and adherence to (84%) ART high.
- Identify the therapeutic process necessary to promote acceptance of and adherence to ART

Importance of TRUST

Acceptance of and Adherence to ART

Altice, Mostashari, Thompson, Friedland JAIDS 2001

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A O R p value

Acceptance

TRUST in **Physician Scale** 0 .08 <0.0001

MISTRUST **Medications** 0.30 <0.001

Adherence

Side Effects 0.09 0.001

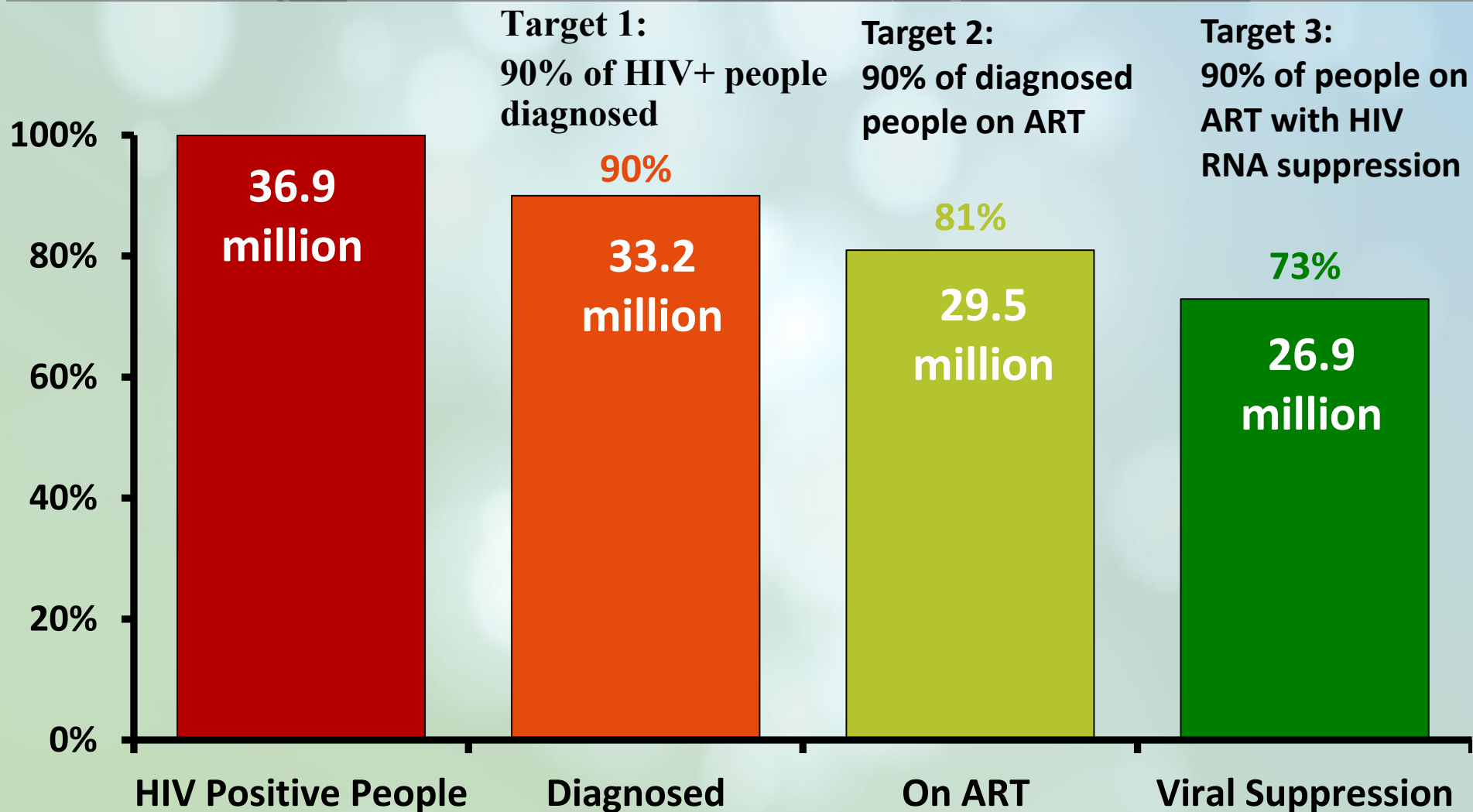
Complexity of ART regimen 0.33 0.01

Social Isolation 0.08 0.005

8% increase in acceptance for each unit increase in 11 item Trust in Physician Scale (Anderson and Dietrick)
Three fold reduction for those mistrustful of medications



UNAIDS 90-90-90: HIV Treatment Targets for 2020 with Global Estimates (2014)



Maximizing and Broadening Treatment success

Reaching out to the Hard to Reach

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These goals won't be achieved without special and sustained attention to hard to reach populations and social determinants of health and disease

- People in remote and/or underserved urban and rural areas locally and globally
- People who inject drugs or use alcohol
- People with mental illness
- People living in vulnerable personal, social and economic situations
- People who are imprisoned or detained in jails

This requires reaching out into the *communities and special settings* in which populations live and in doing so as a provider team

Superiority of Directly Administered Antiretroviral Therapy Compared to Self-Administered Therapy among HIV-Infected Drug Users: A Prospective, Randomized, Controlled Trial

Altice F, Smith-Rohrberg D, Bruce, R, Springer S, Friedland G: Clin Infect Dis 2007



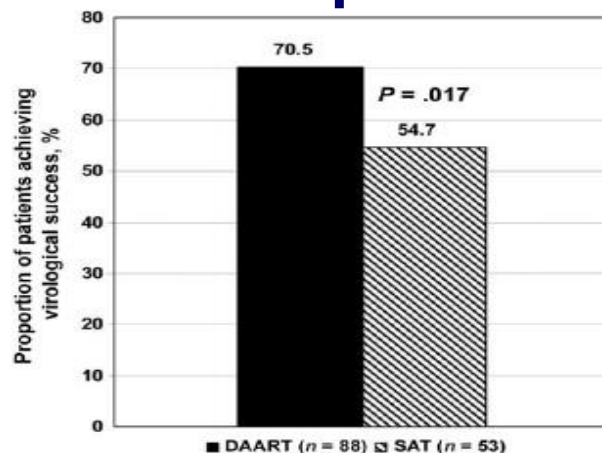
- Community based intervention of DAART vs self-administered ART in PWID
- PWID received supervised therapy 5 X/wk **delivered in a mobile community based health care van**
- Outcomes :
reduction in HIV-1 RNA level to
ND @ 6 mos
mean change from baseline CD4+



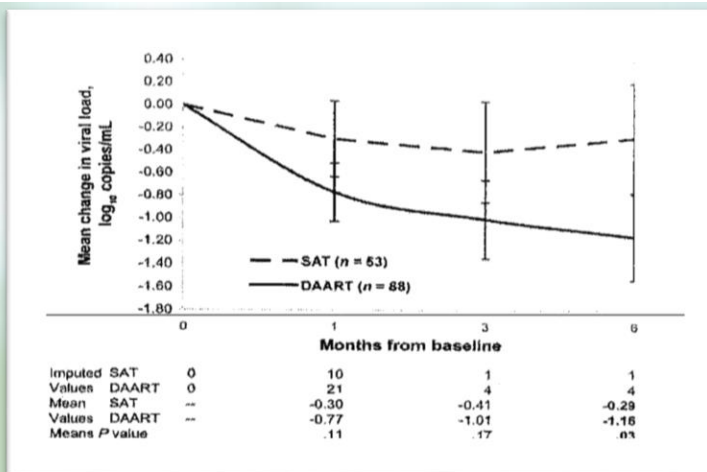
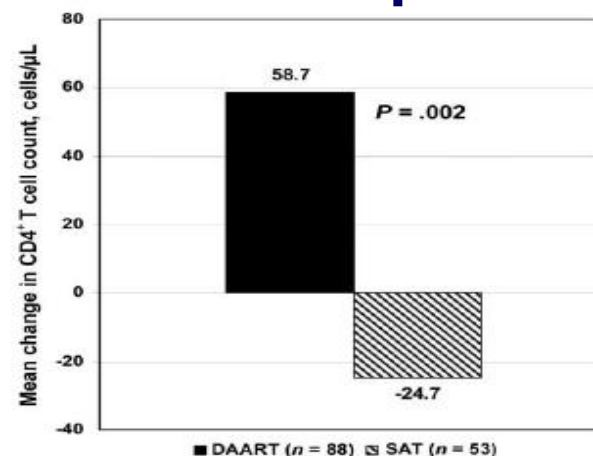
DAART Specialist	Drug Treatment Coordinator
HIV Physician	Outreach Workers

Superiority of Directly Administered Antiretroviral Therapy over Self-Administered Therapy among HIV-Infected Drug Users: A Prospective, Randomized, Controlled Trial

VL Response



CD4 Response



Maximizing and Broadening Treatment success

Reaching out to the Hard to Reach

addressing co-morbidities

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CLINICAL SCIENCE

Extended-Release Naltrexone Improves Viral Suppression Among Incarcerated Persons Living With HIV With Opioid Use Disorders Transitioning to the Community: Results of a Double-Blind, Placebo-Controlled Randomized Trial

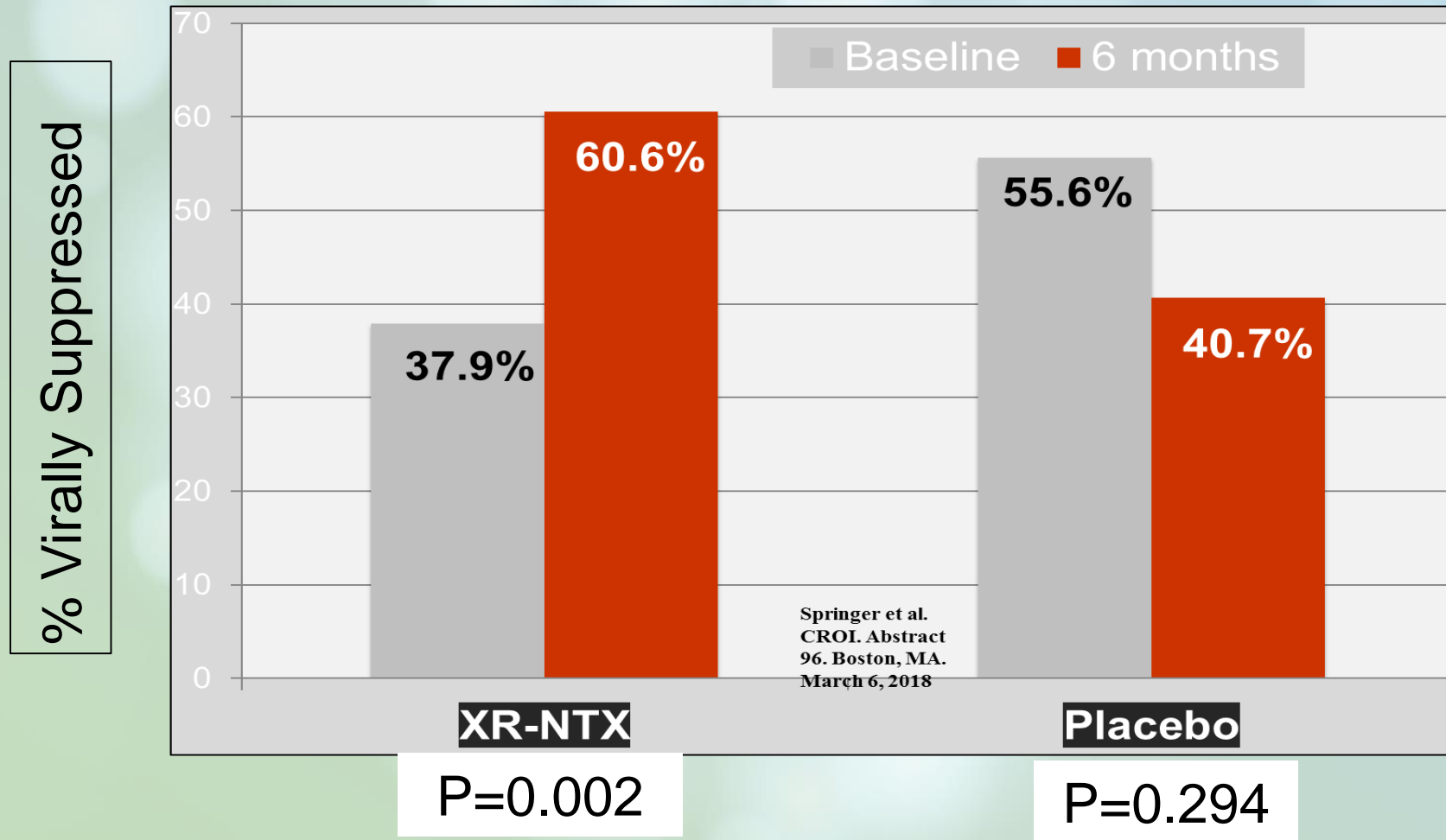
Sandra A. Springer, MD,† Angela Di Paola, MS,‡ Marwan M. Azar, MD,* Russell Barbour, PhD,† Breanne E. Biondi, MPH,* Maureen Desabrais, MEd,§ Thomas Lincoln, MD,§ Daniel J. Skiest, MD,§ and Frederick L. Altice, MD*†||¶*

J Acquir Immune Defic Syndr • Volume 78, Number 1, May 1, 2018

- Relapse to drug & alcohol use occurs quickly after release associated with
 - recidivism and loss of Viral Suppression
- Worked with prisoners directly before released into the community
- RCTs with extended-release naltrexone (approved for opioid and alcohol use disorders)
 1. Opioid use disorders - NEW HOPE
 2. Alcohol use Disorders -INSPIRE
- Achieved significant improvement in relapse and VS at < 50 copies/mL

Change in Viral Suppression (<50 copies/mL) from Baseline to 6 months: NEW HOPE (Opiate use)

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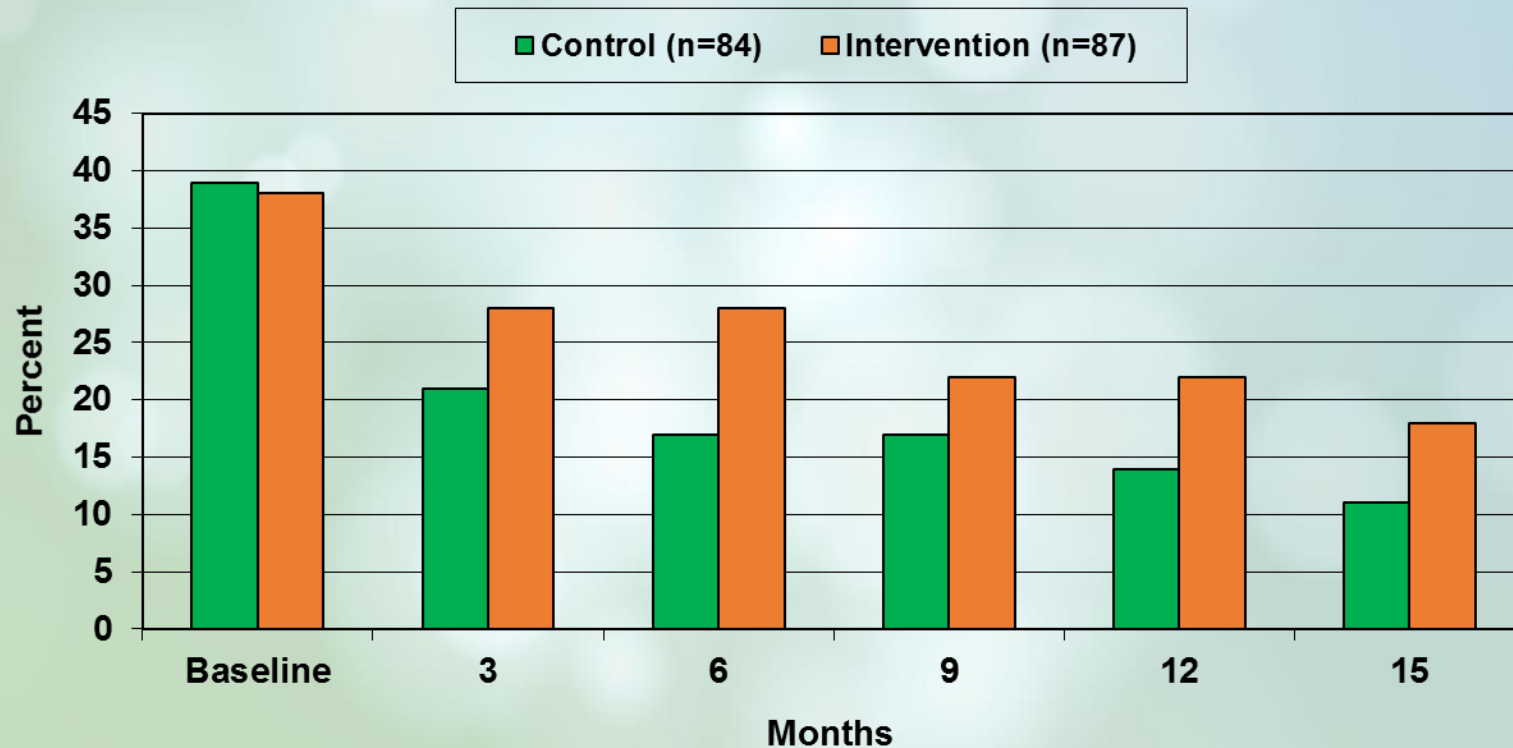


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ATHENA (Adherence Through Home Education and Nursing Assessment):
A Randomized Controlled Trial examining the effectiveness of a home
nursing and peer intervention designed to improve adherence to HAART



Results

Subjects with $\geq 90\%$ adherence



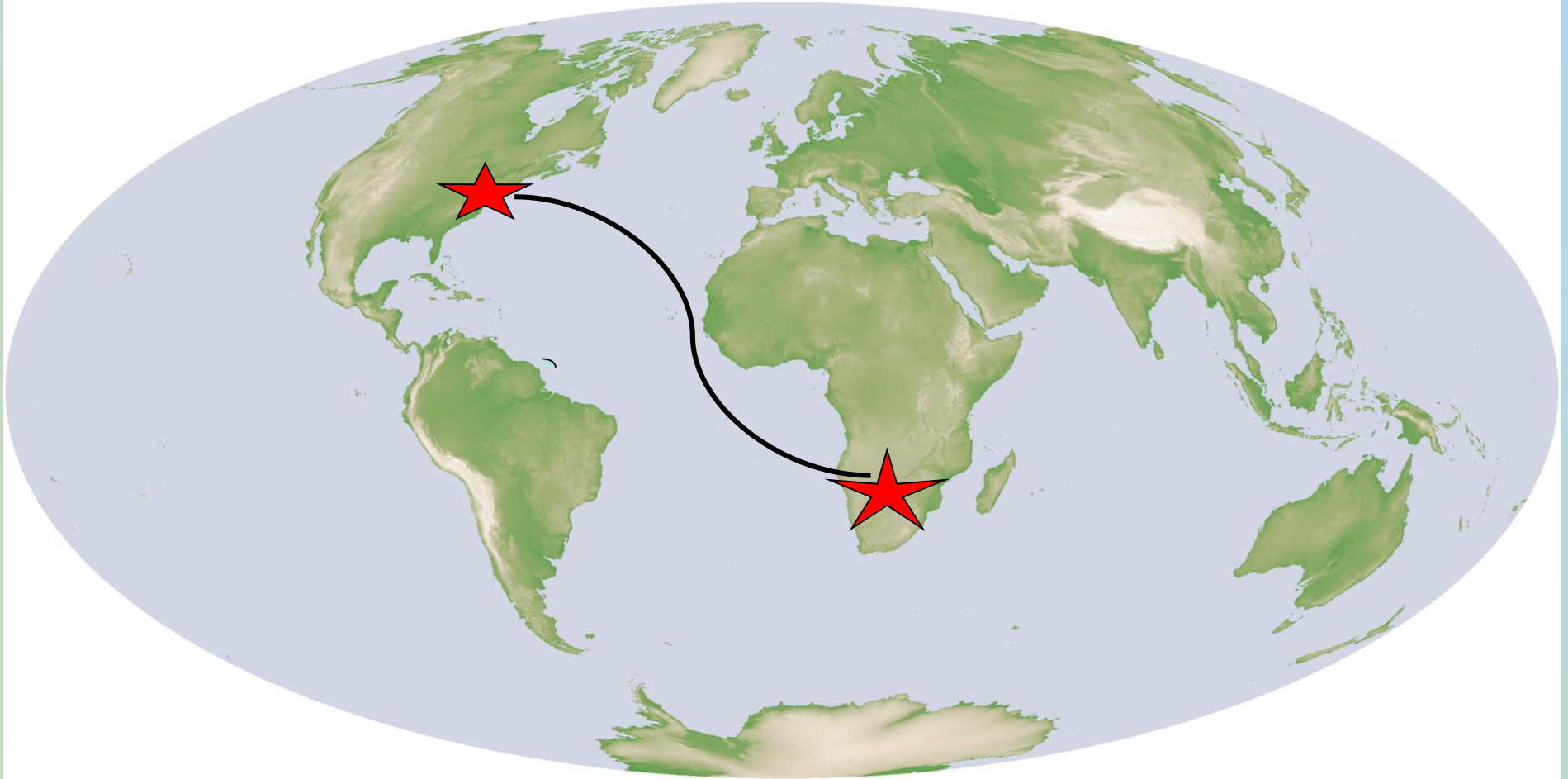
(Extended Mantel-Haenszel Test: 5.41, $p=.02$)

Moral of the story

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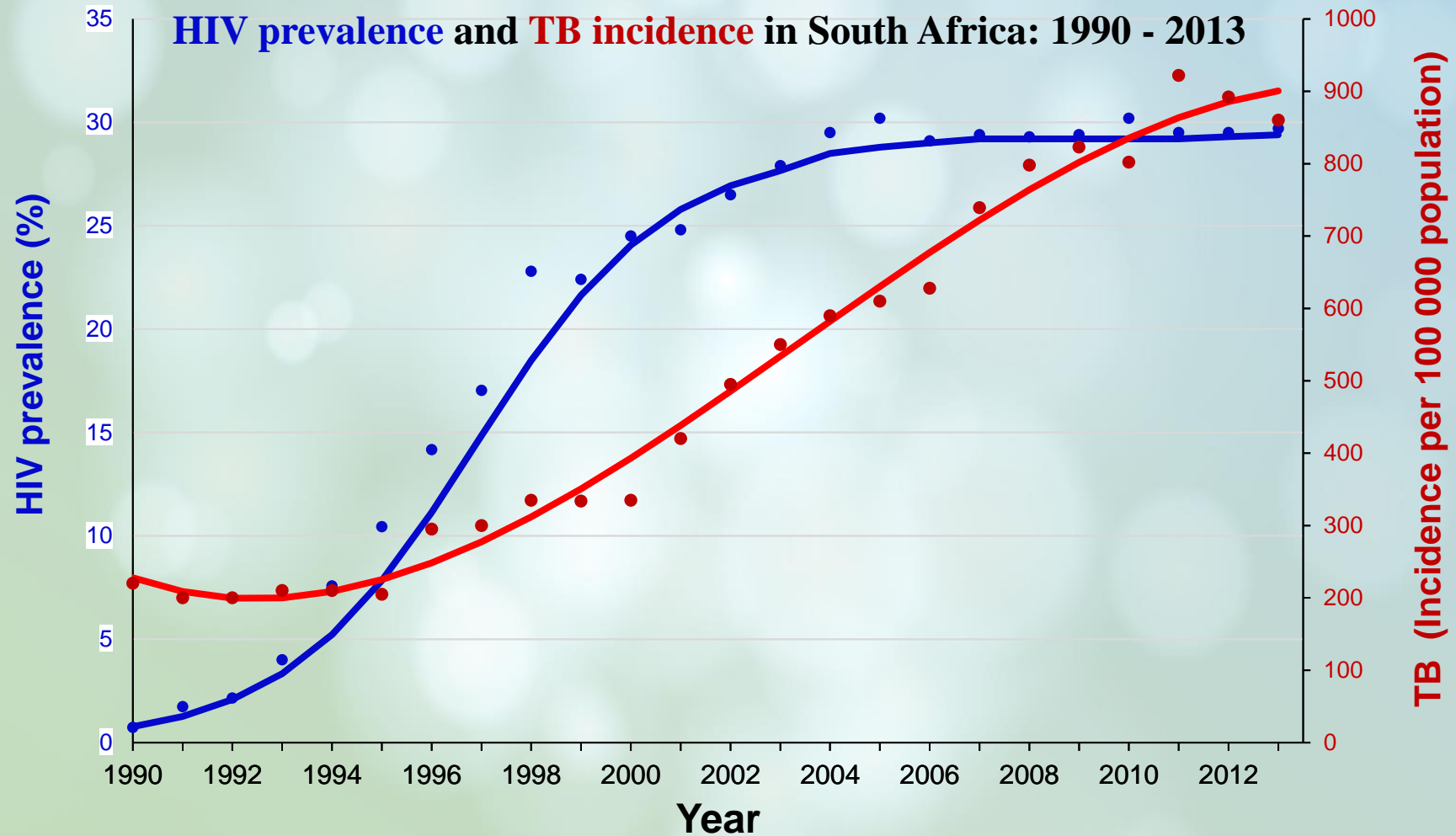


- Patients are more complicated than HIV and their regimens
- A picture is worth a thousand words
- A home or community visit or project is worth a thousand pictures



Broadening Treatment success Co-morbidities

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Source: Annual point estimates from the South African Department of Health;

<http://www.tbfacts.org/tb-statistics-south-africa/> and <http://data.worldbank.org/indicator/SH.TBS.INCD>

Note: The lines are based on fitted mathematical models developed by E Gouws (HIV) and A Grobler (TB)

Co-morbidities - TB and HIV Integration

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SAPIT trial outcome: Mortality rates

	Integrated Treatment Arm n = 431	Sequential Treatment Arm n = 214
Number of deaths	24	26
Person-years of follow-up	469	224
Mortality rate per 100 person-years	5.1	11.6

56% lower mortality with integrated TB-HIV treatment

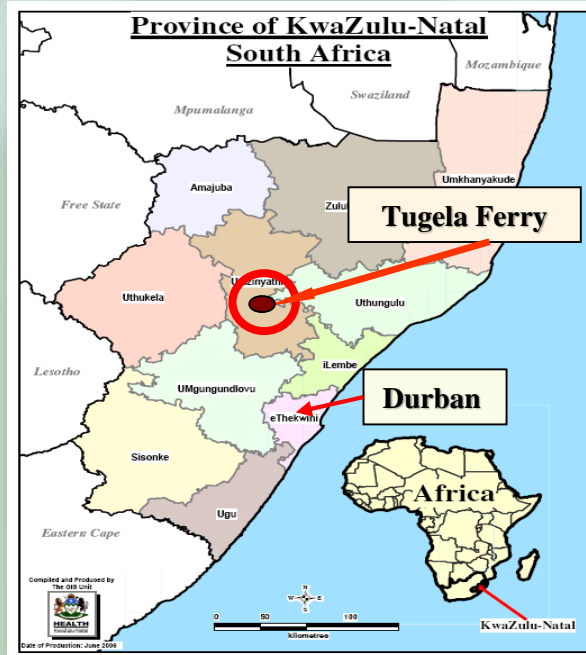
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Timing of Initiation of Antiretroviral Drugs during Tuberculosis Therapy

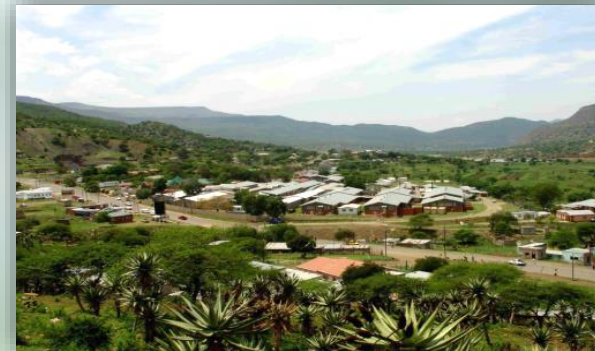
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Gerald Friedland, M.D., and Quarraisha Abdool Karim, Ph.D.

Tugela Ferry-Msinga Sub District Rural KwaZulu Natal



Tugela Ferry-Msinga

- 180,000 traditional Zulu people
- **Extreme poverty**
 - **Poorest sub district in South Africa**
- **High TB and HIV burden**
- District Hospital-COSH; Philanjalo-NGO
- HIV/TB ART initiation -Sizonqoba study
- First site of national roll out of ART
- Site of uncovering epidemic of XDR-TB



Community based HIV/TB integrated intensive case finding in congregate and home based settings

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- Feasible & acceptable
- Multiple sites
 - >20,000 adults
 - 10% HIV positive
 - 3% with active TB
 - 30% DR TB
- Community Health Care Workers and Task shifting
- Linkage to care
- Strengthening care continuum

Where are the men? #ADHERENCE2018



- Shebeens offer opportunity for HIV testing among high risk young men and women
- Identify and link those with HIV to care
- Offer prevention, incl PrEP



Maximizing and Broadening Treatment success

Reaching out to the Hard to Reach

Community and peer based strategies

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Peer Group Monthly Regimen
Construction
Tugela Ferry, South Africa



Adherence Clubs as models of ART
delivery & Adherence Support
Cape Town, South Africa

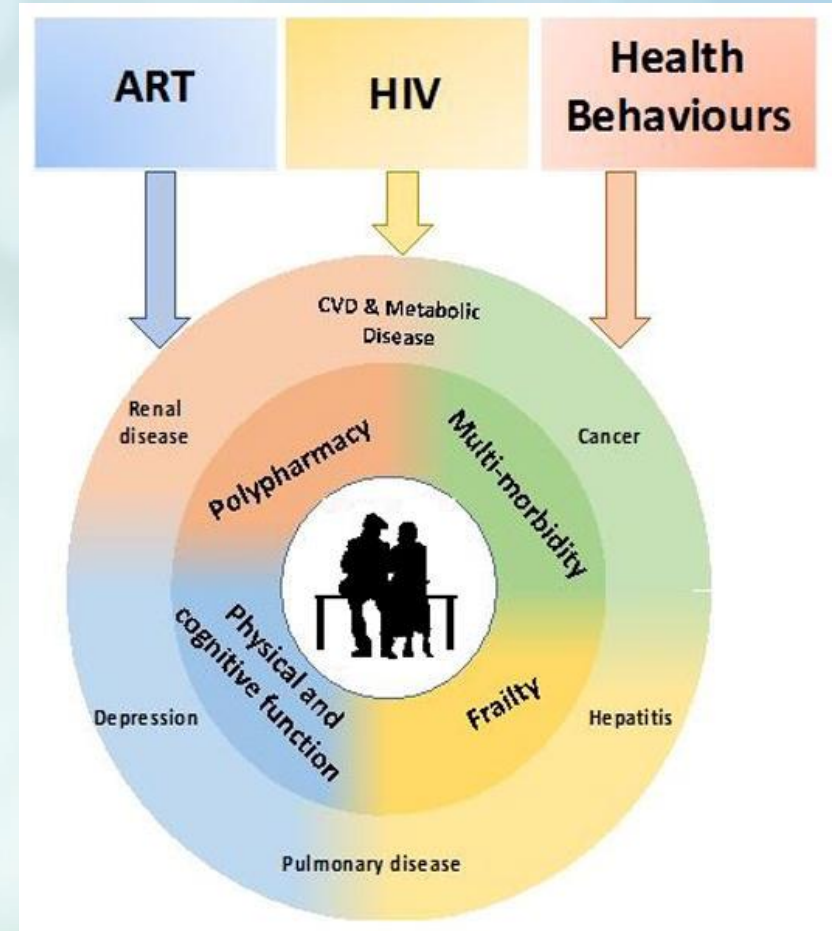


Broadening Treatment success - HIV and Aging:—

Improving and sustaining quality of life



- The gratifying longer survival with HIV, has resulted in increasing the # and % of older adults living with HIV in all regions of the world.
- Approximately 30% of adults living with HIV in high income countries are 50 or over.
- More than 10% of adults living with HIV in low- and middle-income countries are 50 or over
- HIV ART and aging comorbidities affect morbidity and mortality
- Treatment success should be measured not just by VL and CD4 but by Quality of Life for PLWH, the goal is aging well with HIV.



Althoff, K , Smit, M, Reiss, P, Justice, A
Current Opinion in HIV AIDS: [2016 - Vol 11 - 5 - p 527-536](#)



Lifetime Provider adherence

- Lifetime-what of providers' lifetimes'?
- Sustaining our own healthy selves and productive work to the end of HIV/AIDS
- Recognize the importance of mentoring and need for passing the baton to the next and the generation and beyond

HIV Training Track

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Curriculum



General Primary Care - Residents can go to **YOBM** to access the 3-year outpatient general ambulatory medicine case-based curriculum. Residents will be reviewing these topics at preclinic conferences.

HIV Primary Care - The HIV Training Track curriculum was developed using tools and material that will describe the framework to the residents in order to achieve competency and expertise in caring for HIV-infected patients.



Entrustable Professional Activities (EPAs)

The three year Yale HIV training track curricular goals and objectives are based on the 12 following Entrustable Professional Activities (EPAs) that we believe are necessary to be an outstanding independent provider of HIV primary care at the end of the HIV residency training.



Goals and Objectives

The overall goal of the Yale HIV Training Track is to provide Yale primary care residents with the opportunity to enhance their knowledge of HIV disease and associated opportunistic infections, and to provide a venue for them to develop expertise and appropriate professional attitudes regarding a primary care role...

HIV Training Track

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Strategies for lifeterm treatment success

- Continue and strengthen what we have done well
 - Including community and peer activities
- Develop and deploy new strategies: Rapid initiation, Differential Service Delivery. Task shifting. One size need not fit all
- New long acting and safe and acceptable medication
- Encourage use of new tools-but to supplement, not replace the fundamentally human content of HIV care
- Robust implementation research
- Quality of life not just quantity
- Address and fix social determinants which are at the root of HIV risk and essential for successful adherence and treatment

Thank You

#ADHERENCE2018



- **Bronx/Montefiore**

- Robert Klein
- Peter Selwyn
- Ellie Schoenbaum
- Carol Harris
- Cathy Small
- Brian Salzman
- Lou Schrager



- **New Haven/Yale/YNHH**

- Sheela Sheno
- Laurie Andrews
- Ralph Brooks
- Michael Kozal
- **Rick Altice**
- Ditas Villanueva
- Lydia Barakat
- **Sandra Springer**
- AIDs Program staff



Yale School
of
Medicine

- **Durban, South Africa**

- Slim&Quarraisha Karim
- Umesh Lalloo
- Kogie Naidoo
- Nesri Padayatchi
- Wm Sturm



- **Tugela Ferry, South Africa**

- Tony Moll
- Francois Eksteen
- Smatosa Khosa
- Neel Gandhi
- Sarita Shah
- James Brust
- Jason Andrews
- DDCF ICRFs
- J & J Scholars



People and communities in
The Bronx, New Haven and South Africa