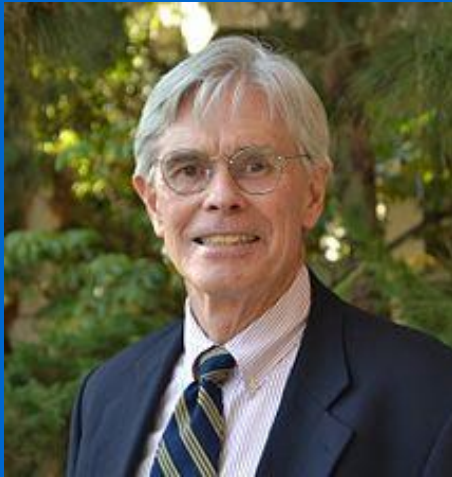


Facilitating Lessons Learned: U.S. and Overseas



Tom Coates, PhD

Distinguished Professor of Medicine

Michael and Sue Steinberg Professor of
Global AIDS Research

Director, UCLA Center for World Health

Director, University of California Global
Health Institute (UCGHI)

Main Points

Behavioral, technological, and biomedical strategies are necessary, but not sufficient to reach 90-90-90

We need to reframe our approach to substance abuse and mental health problems as they affect HIV risk and treatment

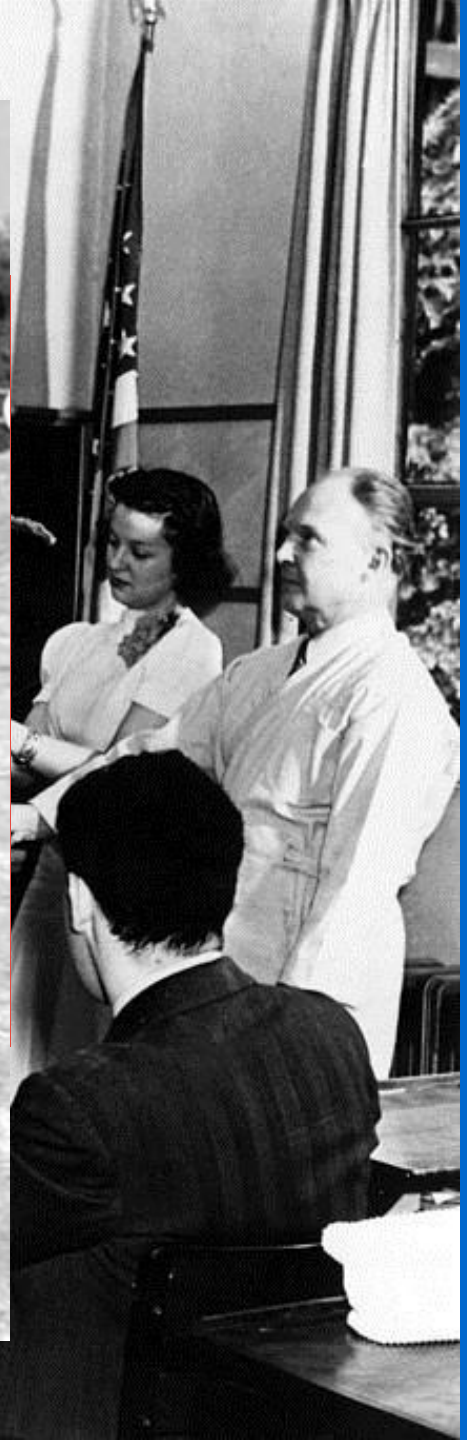
Biomedical strategies will continue to advance

We need a research agenda to address social structures, reaching men, and people with multiple vulnerabilities

Health services research and implementation science are essential tools

David Geffen School of Medicine



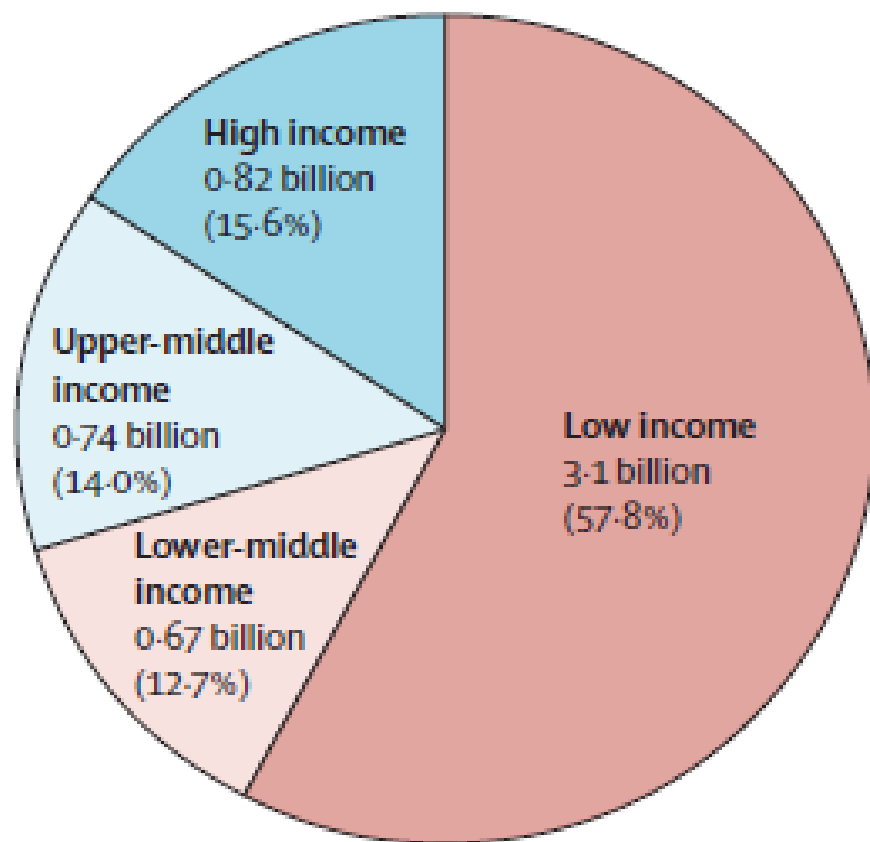




RONALD REAGAN UCLA MEDICAL CENTER



A 1990



B 2011

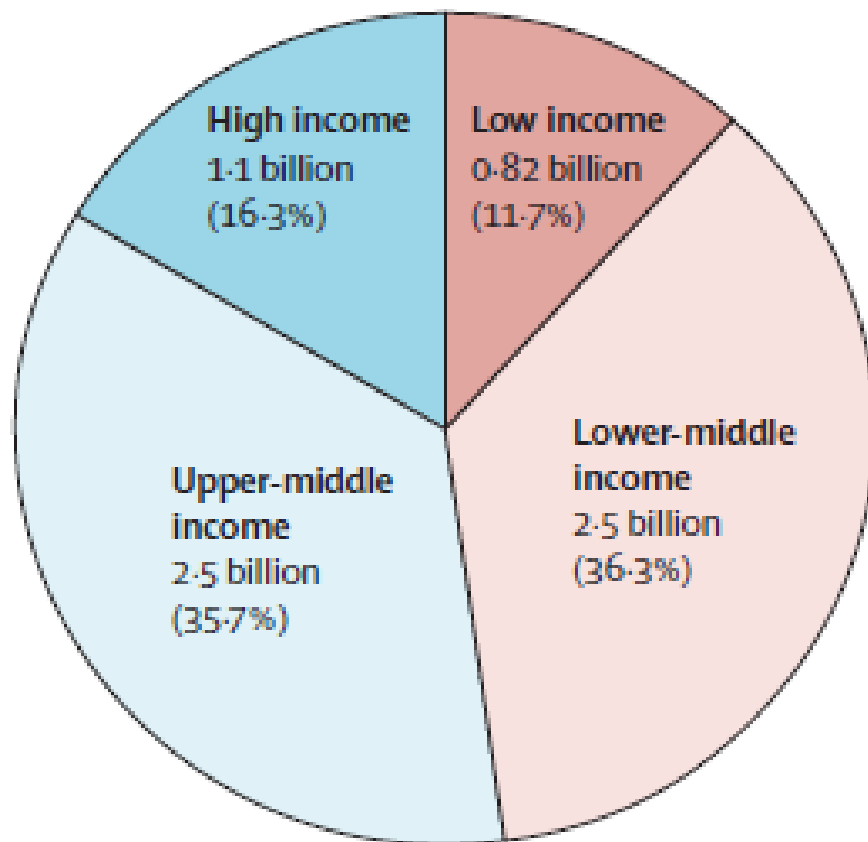


Figure 5: Movement of populations from low income to higher income between 1990 and 2011

Lancet, Global Health 2035

Evolution of Behavioral Strategies

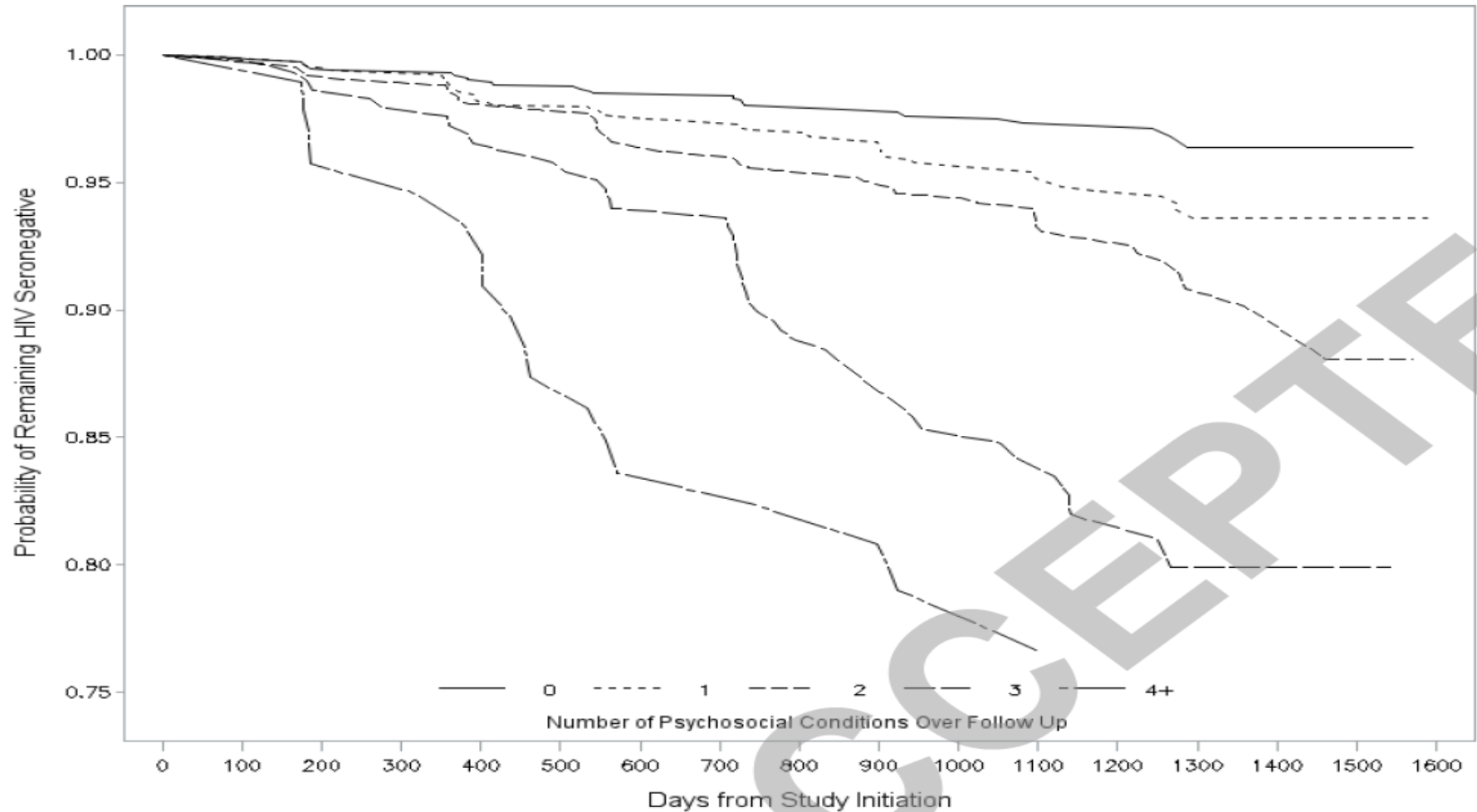
1. Prevention via behavior change
2. Mitigation of the psychosocial impact of infection including social stigma
3. HIV testing domestically and in resource-poor settings in the absence of treatment
4. Substance abuse and mental health treatment

Project EXPLORE

- 4295 HIV- MSM in 6 cities in the US
- SF, Seattle, Boston, NYC, Chicago, Denver
- 16 years or older
- Reported engaged in anal sex with 1 or more men in the past year
- 28% Minority
- 40% Household Income <30,000
- Randomized to intervention and control
- Intervention not efficacious
- Followed for 4 years
- 5 syndemic conditions evaluated: depressive symptoms, heavy alcohol use, stimulant use, poly-drug use, and childhood sexual abuse

Multiple Vulnerabilities in Persons with HIV-1

Figure 1. Hazard of HIV seroconversion by syndemic condition.



No One Thought That HIV Prevention Would Be This Difficult



Transf
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Distribution of U.S. Global Health Funding, By Sector,

FY 2006-10 Request

- Other
- Vulnerable Children
- NTDs
- Global Health Security
- TB
- FP/RH
- Malaria
- Global Fund
- MCH/Nutrition
- HIV



Combination Prevention

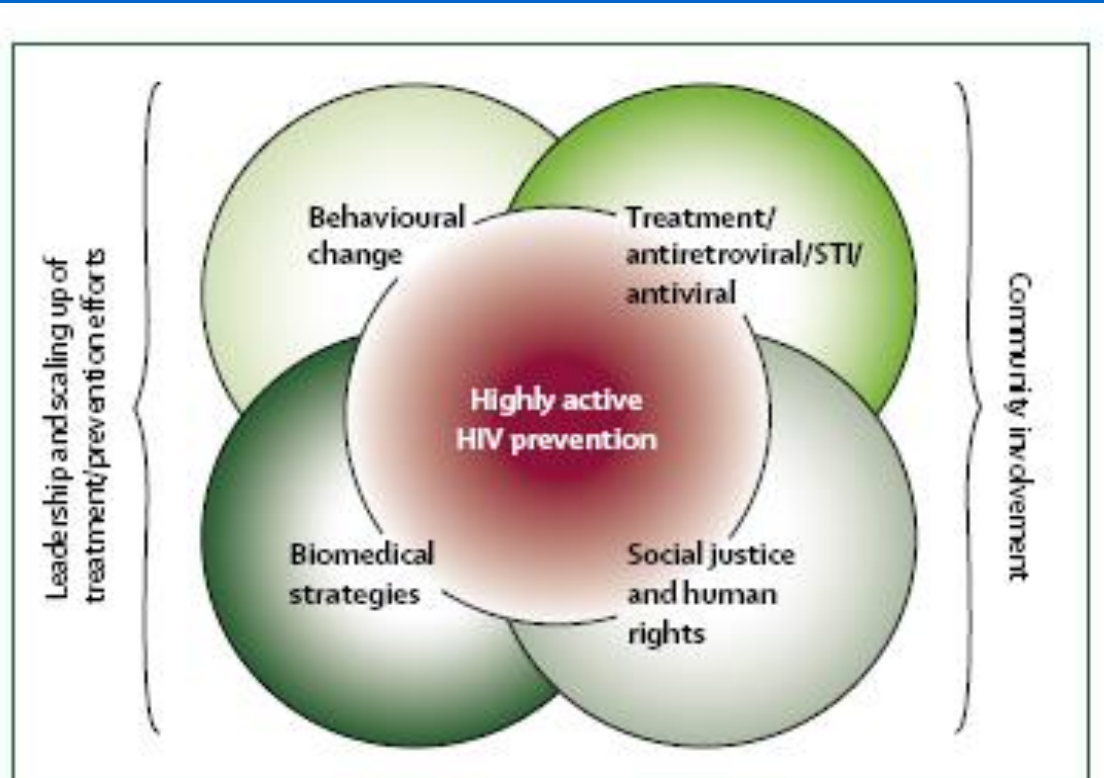


Figure 1: Highly active HIV prevention

This term was coined by Prof K Holmes, University of Washington School of Medicine, Seattle, WA, USA.⁵ STI=sexually transmitted infections.

COMBINATION HIV PREVENTION



Microbicides for women

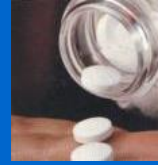
Abdool Karim Q, Science 2010

Male circumcision



Auvert B, PloS Med 2005
Gray R, Lancet 2007
Bailey R, Lancet 2007

Treatment of STIs



Grosskurth H, Lancet 2000



Treatment for prevention

Donnell D, Lancet 2010
Cohen M, NEJM 2011

Female Condoms



Behavioural positive prevention



Fisher J, JAIDS 2004

Male Condoms



Oral pre-exposure prophylaxis



Grant R, NEJM 2010 (MSM)
Baeten J, 2011 (Couples)
Paxton L, 2011 (Heterosexuals)

HIV Counselling and Testing



Coates T, Lancet 2000
Sweat, Lancet ID, 2011
Coates, CROI, 2013

Post Exposure prophylaxis (PEP)



Scheckter M, 2002



Vaccines

Rerks-Ngarm S, NEJM 2009

Behavioral Intervention

- **Abstinence**
- **Be Faithful**

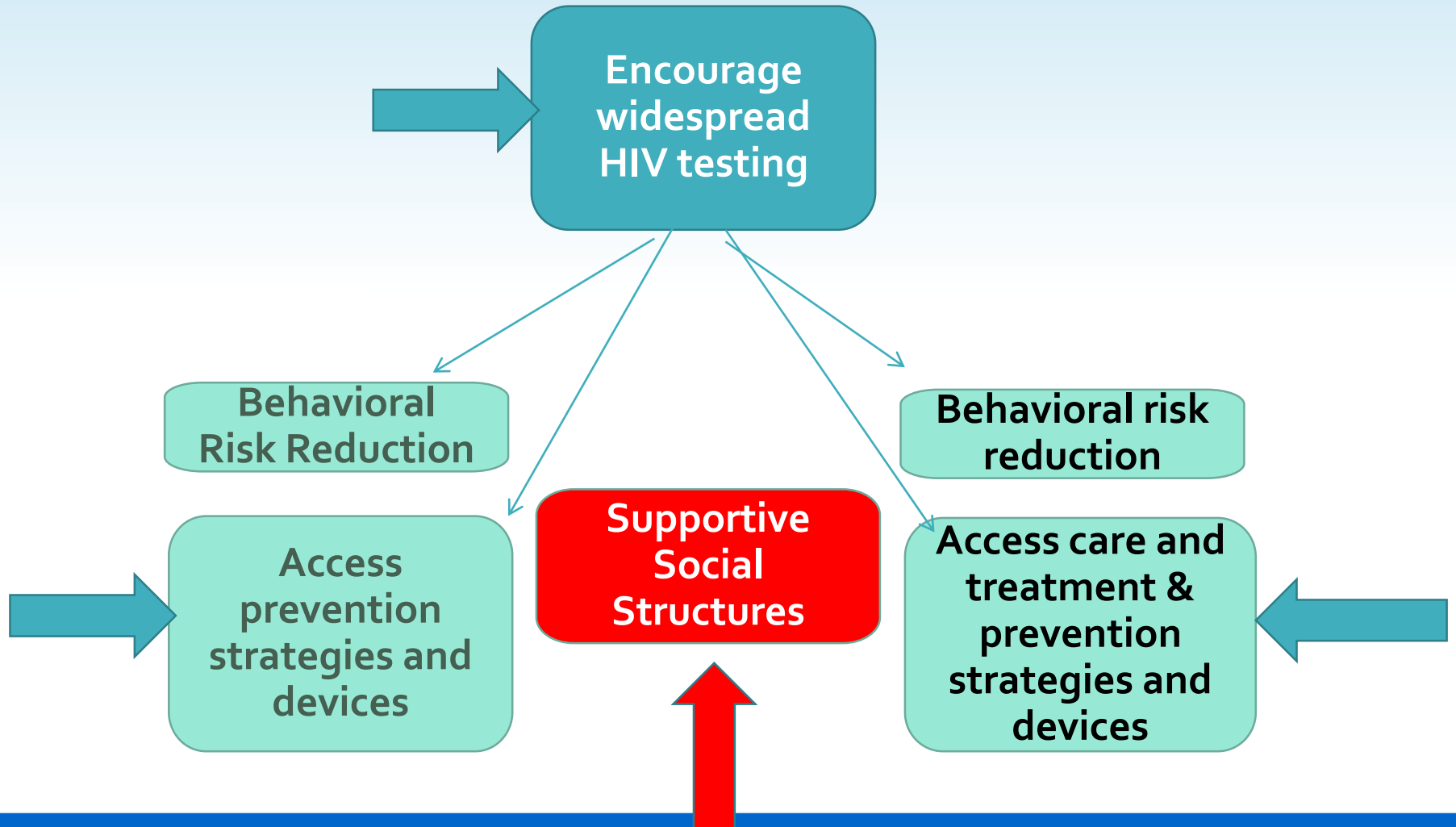


Note: PMTCT, Screening transfusions, Harm reduction, Universal precautions, etc. have not been included – this is focused on reducing sexual transmission

Evolution of Behavioral Strategies

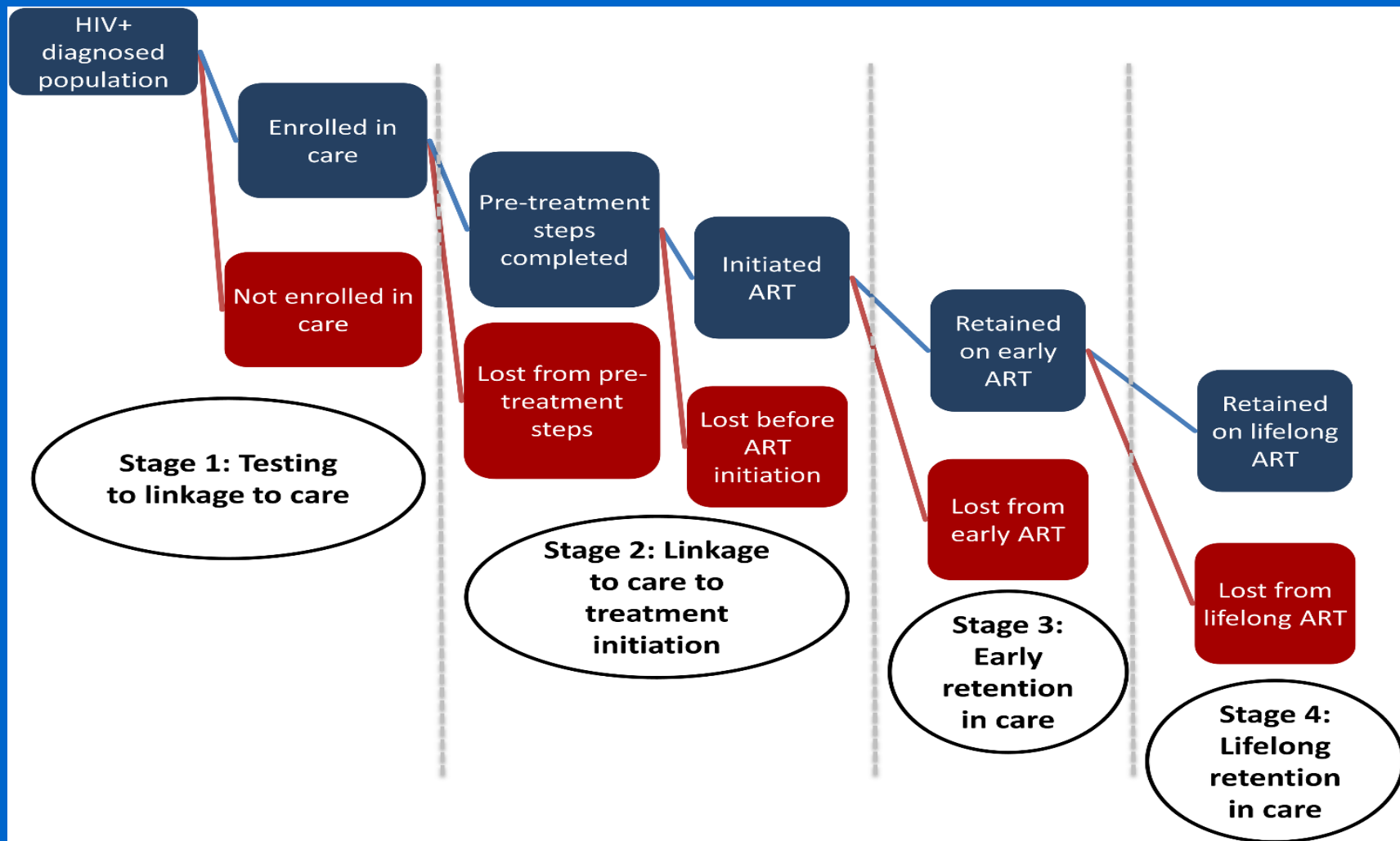
1. Behavioral and biomedical strategies are necessary, but not sufficient to reach 90-90-90
2. Substance abuse and mental health treatment are out of reach for most of the world
3. We need to incorporate social and technological solutions and study their community-wide impact

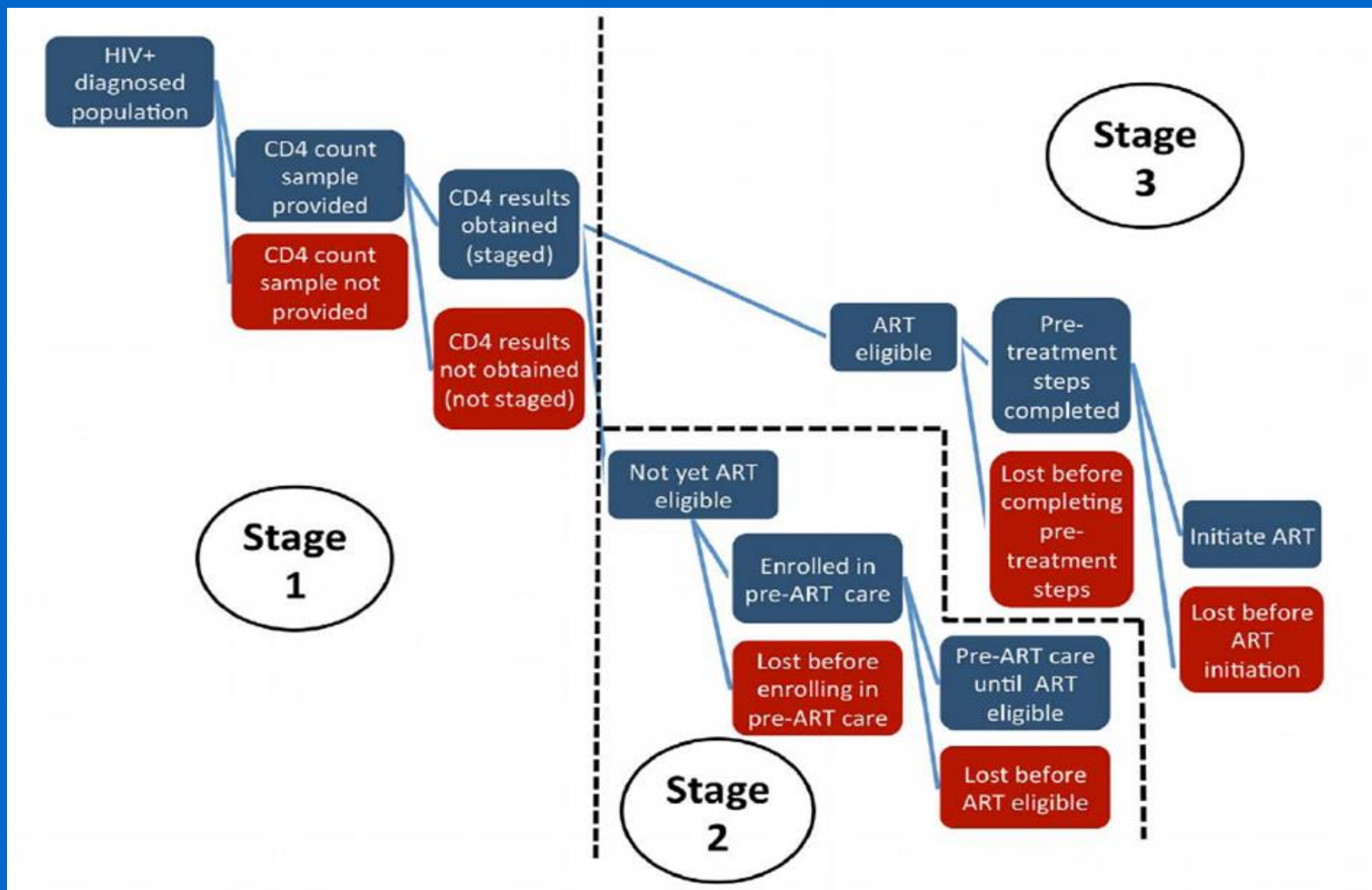
HIV PREVENTION AND TREATMENT NEED TO



HIV Testing/Reaching Men

- Routine Testing
- Mobile HIV Testing and Counseling
- Home HIV Testing and Counseling
- Multi-disease Campaigns
- Active Partner Notification





Don't Make Housing for Poor Too Cozy Carson Warns



NY Times, May 3, 2017

The Voice Study Results

- 5209 enrolled
South Africa, Uganda, and Zimbabwe
- Retention was high
(91% during 5509 person years of follow-up)
- No efficacy observed in modified ITT
TDF 1.49 (0.97-2.29)
TDF-FTC 1.04 (0.73-1.49)
TFV GEL 0.85 (0.61-1.21)
- TFV detected in 30%, 29%, and 25% of randomly selected participants
Association between verified adherence and protection against infection

NEJM, 2015, 372, 509 ff



Increased HIV Case Finding

- The intervention produced an almost 4-fold increase in the detection of previously undiagnosed HIV cases
 - This was true at all of the 3 sites where differential utilization could be assessed

Increased testing especially among men

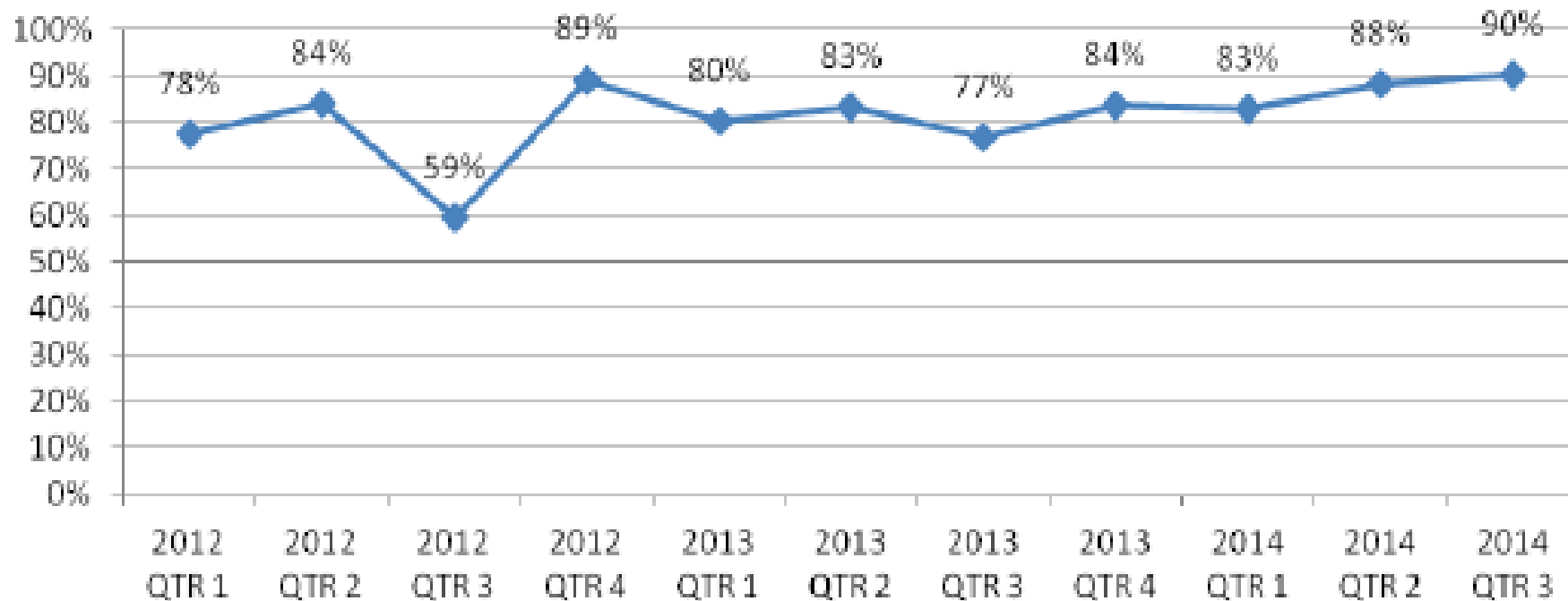
- The intervention increased HIV testing by 45% among 18-32 year old men and 15% among 18-32 year old women
 - Improvements in testing rates were highest among men and young people
 - Many women had been tested in antenatal clinics but the increase was still significant

Reductions in Sexual Risk

- Number of sexual partners reported by 18-32 year old HIV-infected individuals lower by 8% 95% CI: 1% - 15%, $p = 0.03$
- Number of sexual partners among 18-32 year old HIV-infected *men lower by 18%*
 - 95% CI = 5% to 28%, $p =$

Routine Testing Works

Percent of women with known HIV status in ANC

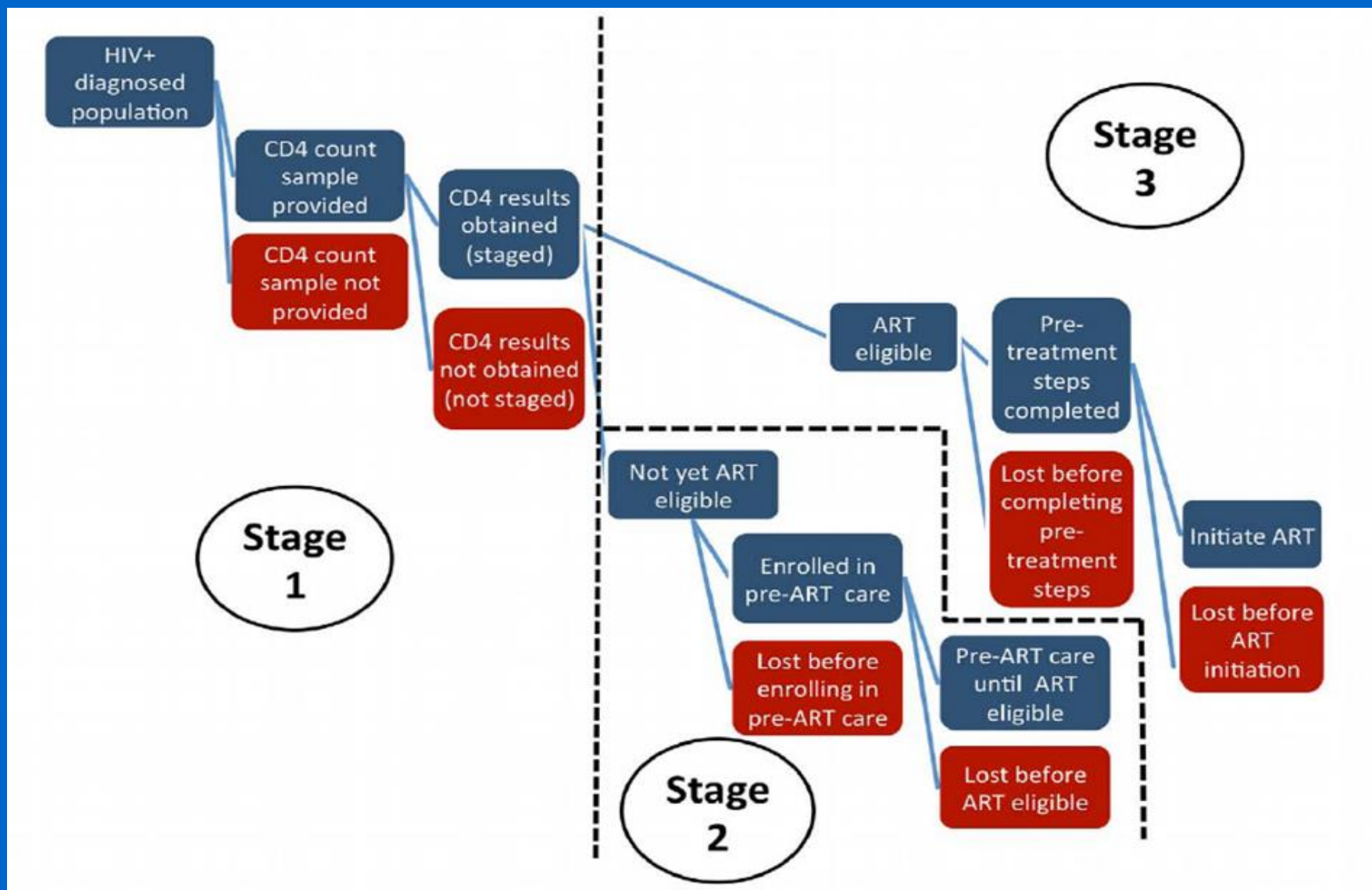


EQUIP Malawi

UCLA Center for World Health

•What have we learned from HIV testing

- Technological improvements
- Social structures
 - couples, families, communities, health systems
- Convenience: Close to home
- Variety of options for accessing services
- Routinized
- Patient-centered and friendly



Main Points

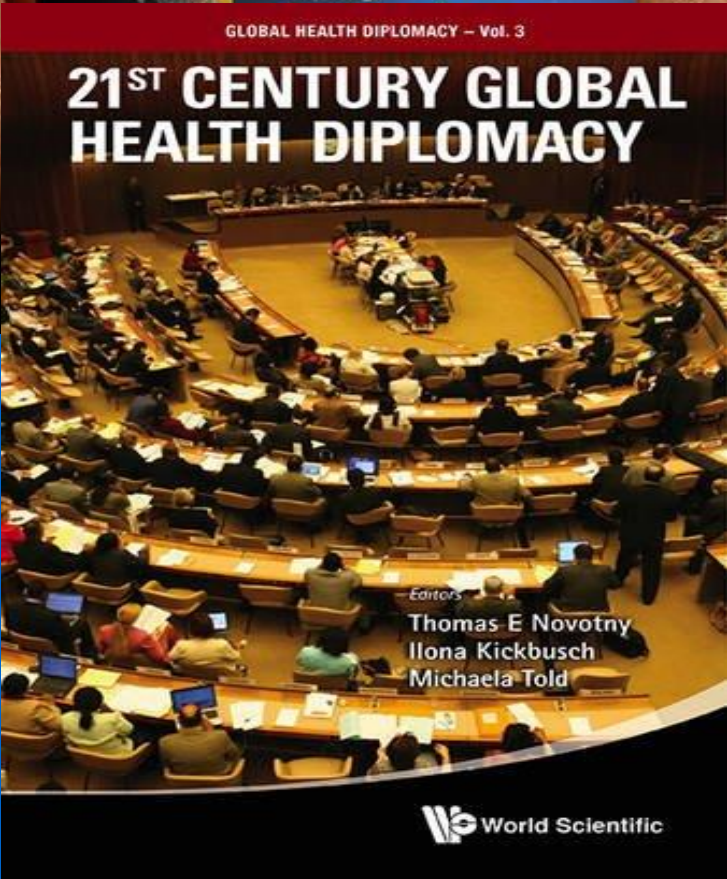
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Making Human Connections

