

Implementation & Uptake: The Achilles Heel of HIV evidence-based treatment, prevention and care

Deborah Jones Weiss, PhD
University of Miami
Miller School of Medicine

Academy of Behavioral Medicine Research
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HIV Prevention & Treatment: Sabotaged by Implementation & Uptake

- Male or female condoms (consistent use ~24%)
- Microbicides – Vaginal/Rectal gels, Vaginal ring (>80% use, 61%)
- Voluntary medical male circumcision (South Africa, ~45%)
- Pre-exposure prophylaxis (PrEP) – ARV prophylaxis (US, 35-52%)
- Antiretroviral (ARV) Prophylaxis – combination ARV to prevent infection during pregnancy and including breastfeeding (~73%) (Prevention of Mother to Child Transmission, PMTCT)
- Antiretroviral therapy (ART) - use of combination of 3+ ARV drugs to achieve viral suppression < 50 copies/ml (consistent use ~66%)

Implementation Science: Bridging the gap



“...an interdisciplinary area of health research focusing on best methods to improve the uptake, implementation and translation of research findings into routine and common practices, addressing the evidence to program gap.”

- NIH

Evidence-based Practices

Applying Implementation Science Strategies to PMTCT in Rural South Africa

- Districts in Mpumalanga Province have some of the highest HIV rates among women in SA ~ 46% in 2013
 - Most women diagnosed during pregnancy
- ~2/3 of HIV+ pregnant women took full advantage of PMTCT services in 2010;
 - MTCT rates higher
 - infant mortality ~17% among HIV+ mothers



“Vikele Umndeni” (Protect Your Family)

- Using Implementation Science methods to target PMTCT protocol delivery, coverage, uptake and sustainability
- Examines the influence of Community, Systemic, Structural, Clinical and Patient characteristics on PMTCT uptake and gaps in care
- Examines the influence of intervention and male involvement on PMTCT uptake in HIV+ women

Challenges to PMTCT Uptake in Rural SA

Patient challenges

- Stigma
- HIV status disclosure
- Knowledge
- Depression
- Intimate Partner Violence
- Male involvement
- Recency of diagnosis
- Partner HIV status

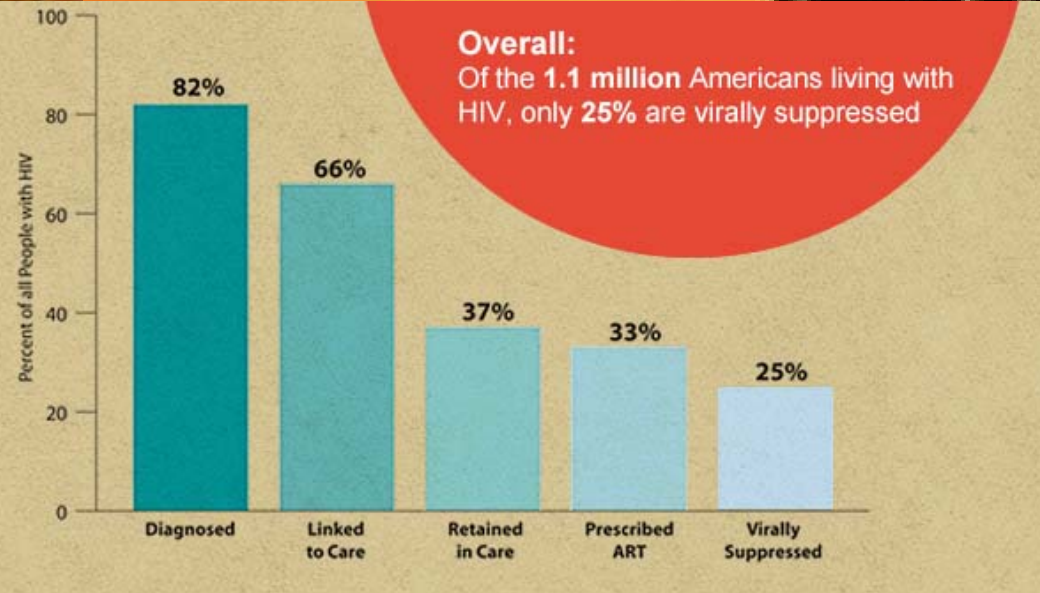
All impact adherence ~50%



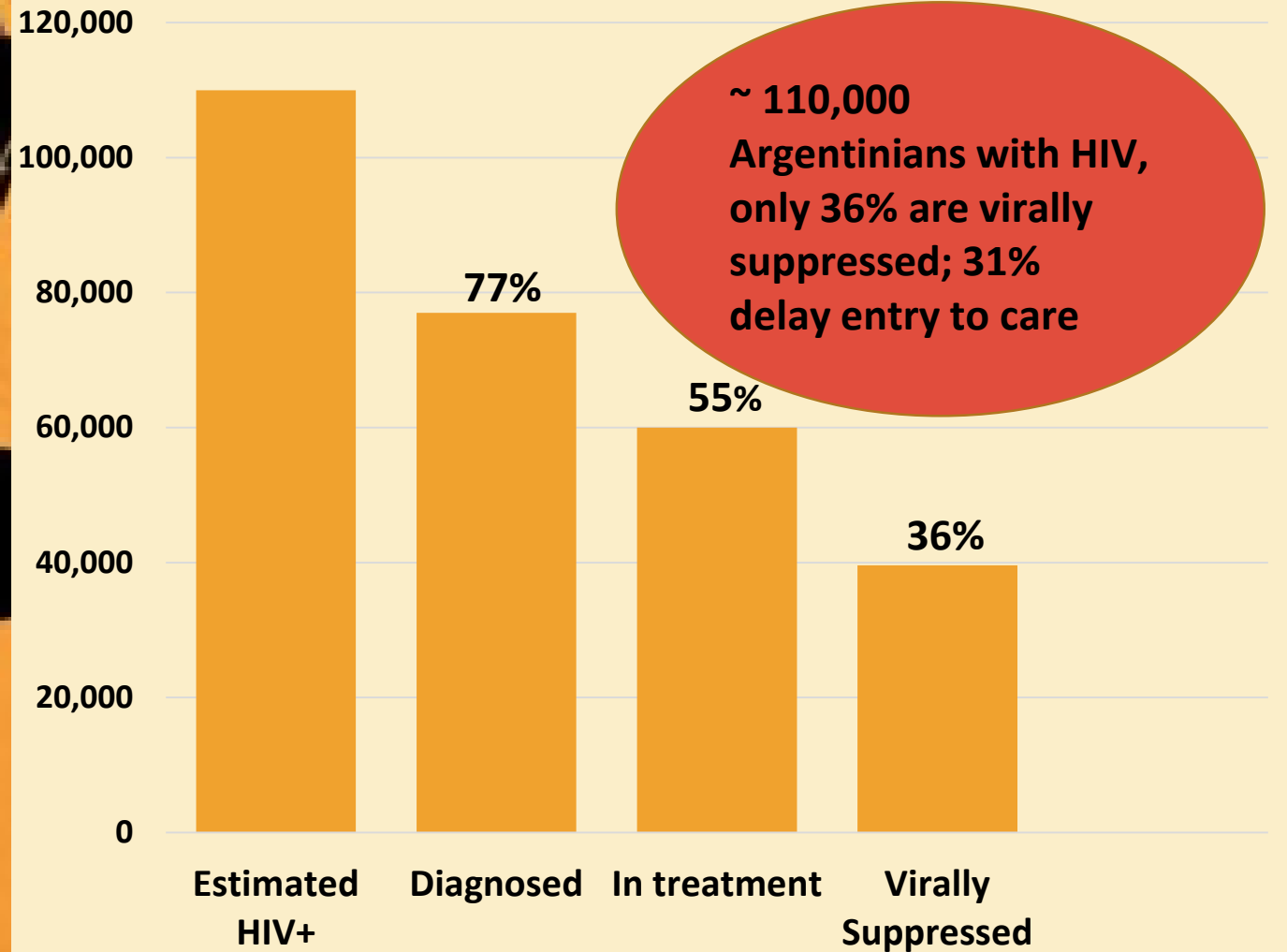
Clinic & system challenges

- Low partner HIV testing
- Client mobility
- Medication stock out
- Test kits stock out
- Protocol confusion
- Work load
- Staff attitudes
- Poor records
- Inaccurate reports

Conexiones y Opciones Positivas en la Argentina: COPA



Argentina HIV Care Continuum



Adherence to ART can result in Viral Suppression and prevent ~98% of HIV transmission

Applying Implementation Science Strategies to HIV care in Argentina

Challenges in linkage to care, viral suppression and retention in care

- 1992: Antiretroviral (ARV) medications available to all
- 2013: ARVs distributed to ~81% of those CD4 count <500 cells/mm³
- Resistance and transmission of resistant virus increases with greater treatment coverage and contributes to treatment failure; 23.8% are on 2nd line tx, low levels of VL testing

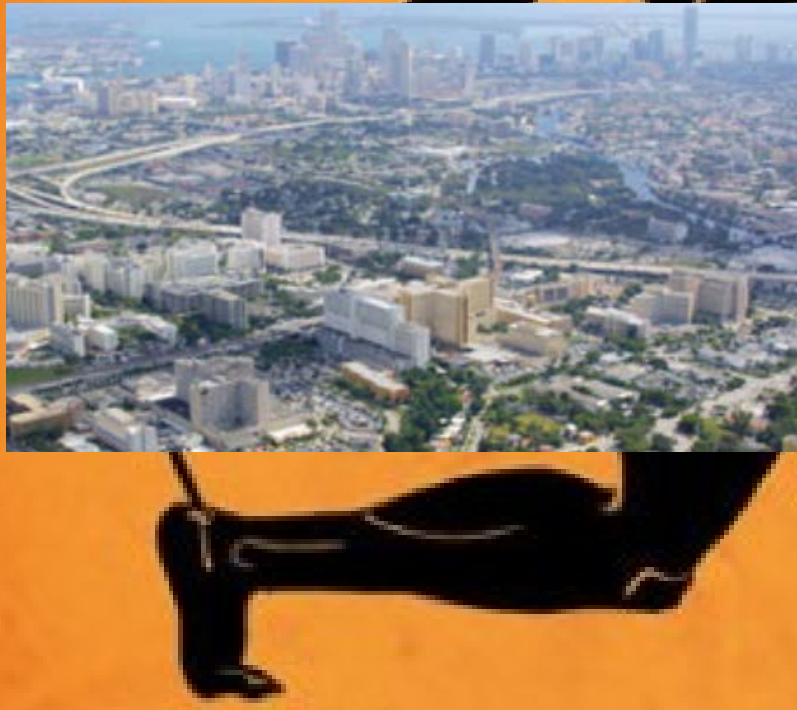


“COPA” (Positive Connections)

- Applies Implementation Science methods to target ARV engagement, adherence and retention in care
- Examines the influence of Structural, Clinical and Patient characteristics on ARV uptake and retention
- Examines the influence of patient and provider interventions on viral suppression in HIV+ patients lost to care, i.e., “challenging patients”

Applying Implementation Science Strategies to Preconception Counseling for HIV-infected Women in USA

- Preconception counseling can reduce the risk of fetal loss, preterm delivery, low birth weight and birth defects and HIV transmission to partners
 - 49% of women report becoming pregnant without clinical consultation
- 33% of pregnant US HIV+ women had discussed their last pregnancy with partners
 - 33% used no prenatal vitamins and continued substance use
- 68% used inconsistent or no contraception in the month they became pregnant



“Pathways”

- Using Implementation Science methods to target preconception protocol delivery, coverage and uptake
- Examines the influence of Community, Systemic, Structural, Clinical and Patient characteristics on preconception counseling uptake and gaps in care
- Examines the impact of decision making on uptake of safer conception methods in HIV+ women

Collaborative Implementation Research

- Increasing the Availability and Acceptability of Circumcision in Zambia (S Weiss)
 - Vaginal practices among HIV+ women in Zambia/ Miami (M Alcaide)



Collaborative HIV Research

- Predictive Biomarkers of CVD Risk in Diverse HIV-1+ Cocaine Abusers (M Kumar)