

Getting to 2020: Top Challenges in Biomedical  
HIV Prevention . . .  
*and the Role of Behavioral Intervention  
Research to Address Them*

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# Overview

- Behavioral science
- Key populations & their specific challenges
- Behavioral intervention research designed to address challenges

# Behavioral Science

or BS?

The hard (difficult) not soft science

Biomedical → bio-behavioral

# Key Populations

- Pregnant and breast-feeding women
- Children
- Adolescents
- MSM
- Transwomen
- Sex workers
- Immigrants/migrants
- People who inject drugs
- Prisoners

Marginalized  
Disempowered

# Specific Challenges of Key Populations

# Pregnant and breast-feeding women

- Poor ART adherence and retention in care, especially post-partum
- Gender inequity
- Partner violence
- Postpartum depression, stress, fatigue (30% w/viral rebound)
- Lack of social and male partner support
- Transition fro PMTCT services to general HIV care



# Children

- Missed opportunities for early infant diagnosis
- Limited pediatric ART formulations
- Limited caregiver competency
- Only 50% of HIV+ children on ART in 2015
- Poor virologic suppression
- Fear of HIV status disclosure



# Adolescents

- Missed opportunities for diagnosis
- Poor linkage, adherence, viral suppression, and retention in care
- Lack of disclosure to perinatally infected youth
- Developmental limitations/tasks
- Poor healthcare transitioning





# MSM

- High community HIV prevalence
- Stigma
- Trauma
- Mental health/substance use
- Criminalization
- Non-disclosure
- Social Isolation



# Transgender Women

- High community HIV prevalence
- Stigma
- Trauma
- Mental health/substance use
- Criminalization of sex work
- Non-disclosure
- Social Isolation



**OUT**

**W**

**GLOBAL  
HEALTH**

# Sex Workers

- Stigma
- Gender-based violence
- Criminalization
- \$\$ Incentives for non-disclosure and unsafe sex
- Hidden population (compounded by digital technology)



# Migrants

- Late entry into healthcare system
- Lack of direct access to healthcare services
- Exposure to difficult or oppressive work environments
- Separation friends/family and a familiar sociocultural environment
- Inability to effectively communicate
- Possibility of deportation or expulsion



# People who Inject Drugs

- Stigma
- Criminalization (of IDU and harm reduction)



# Prisoners

- Stigma
- Criminalization of protection (clean needles, condoms)
- Insufficient preparation for release



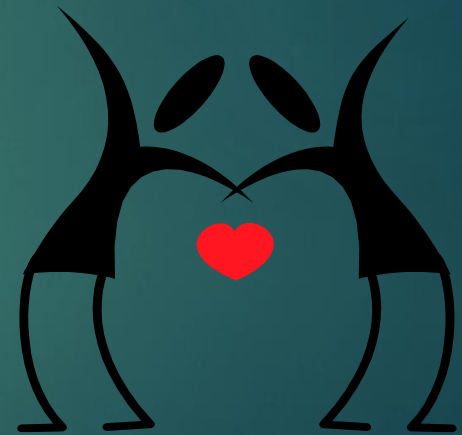
# Opportunities for Behavioral Science

- Adherence Promotion
- Mental Health Treatment
- Disclosure Strategizing
- Stigma Reduction
- HIV Provider Education & Training

# Project PAL

## Promoting Adherence for Life Peer & Pager Support to Enhance Antiretroviral Adherence

- ▶ NIMH R01s MH58986 & MH58986
- ▶ PI: Jane Simoni
- ▶ 1999-2002/2003-2007
- ▶ Seattle, WA







# Project PAL: Methods

- ▶ 223 adult patients receiving primary HIV care at Madison Clinic in Seattle, WA
- ▶ Participants were recruited through study nurse and provider referrals
- ▶ Computer assisted self-interviews were conducted at the clinic



# Project PAL: Results

- ▶ Peer support (not pager) led to better self-reported adherence and had a small effect on EDM adherence
  - ▶ BUT no significant effect on VL or CD4
- ▶ Pagers decreased VL and improved CD4 up to 6 months post intervention
- ▶ Greater attendance at peer support meetings was associated with lower VL
- ▶ Higher pager response rate was associated with lower VL load and improved CD4

# CDC Best Practices

COMPENDIUM OF EVIDENCE-BASED INTERVENTIONS AND BEST PRACTICES FOR HIV PREVENTION

## PEER SUPPORT

Good Evidence – Medication Adherence

### INTERVENTION DESCRIPTION

#### Target Population

- HIV-positive clinic patients who are antiretroviral

#### Goals of Intervention

- Improve adherence to antiretroviral therapy
- Improve clinical outcomes (HIV viral load and CD4

#### Brief Description

The *Peer Support* intervention (i.e., peer support messaging) is an individual- and group-level positive and currently on HAART serve as “support through group meetings and weekly by the peers and research staff with graduated patients an opportunity to interact face-to-face and patients, and share experiences with the identification of barriers to HAART adherence, barriers, and other life issues that impact a dating, substance use, and struggles with mental provide more in-depth one-on-one attention with patients outside of the intervention so the patients at their own discretion.

COMPENDIUM OF EVIDENCE-BASED INTERVENTIONS AND BEST PRACTICES FOR HIV PREVENTION

## PAGER MESSAGING

Good Evidence – Medication Adherence

### INTERVENTION DESCRIPTION

#### Target Population

- HIV-positive clinic patients who are antiretroviral treatment-experienced or -naïve

#### Goals of Intervention

- Improve adherence to antiretroviral therapy
- Improve clinical outcomes (HIV viral load and CD4 cell count)

#### Brief Description

The *Pager Messaging* intervention (i.e., pager messaging only or pager messaging with peer support) is an individual-level intervention. Each patient receives a 2-way pager and a message schedule customized to the patient's daily medication regimen. In addition to dose reminders (which include medication names familiar to the patient and number of pills to be taken), 3 other types of text messages are sent: (1) educational (referring to side effects and their management, medication benefits, understanding laboratory values, the importance of adherence, drug interactions, proper medication storage, resistance, and self-advocacy); (2) entertainment (jokes or thoughts for the day); and (3) adherence assessments. A confirmation return page is requested for every message sent. There are a minimum of 3 daily pager messages for the first 2 months, with frequency gradually tapering in the last month to avoid a rebound in non-adherence. The patients are asked to wear the pager at all waking moments from the first contact till the end of the intervention.

# Intervention Adaptations

This framework has been incorporated into the “Every Dose Every Day” app

## EVERY DOSE EVERY DAY™ *Strategies to improve HIV medication adherence*

### A New Medication Adherence e-Learning Training Toolkit for Providers

Every Dose Every Day is designed to help providers support medication adherence among people living with HIV to improve the health outcomes and increase the prevention benefits of treatment.

### E2D2 Mobile App - New Version!

#### The Every Dose Every Day (E2D2) Mobile Application - Version Update

The Every Dose Every Day mobile application was updated for both iOS and Android platforms in April 2016 to address minor bug fixes, add images and to update medications listed in the app. The app puts power in the hands of the patient by tracking adherence, viral load, and CD4 cell counts; providing dose and appointment reminders and tips for health and wellness; and featuring opportunities to record missed doses and medication side effects. The app may also be helpful with improving adherence to pre-exposure prophylaxis (PrEP). **As of April, there have been 500-1,000 downloads.**



# Project PAL: Implications



## ▶ Task-shifting:

- ▶ HIV+ peers can be trained to provide support and promote adherence
- ▶ Can function face-to-face and via phone

## ▶ Technology:

- ▶ Can supplement human contact and support
- ▶ Can be highly automated
- ▶ Increasingly available and affordable

# Nuevo Dia

## Mental Health and HIV on US-Mexico Border

- ▶ Supported by NIMH R34 MH084674 & MH084674-S1
- ▶ PI: Jane Simoni
- ▶ 2008-2011
- ▶ Purpose: to address depression and ART adherence among PLWHA receiving care on the US-Mexico border



# Nuevo Dia: Intervention

- ▶ Adapt an empirically supported cognitive-behavioral therapy program (Safren et al., 2009) for ART adherence and symptoms of depression (CBT-AD)
  - ▶ Weekly sessions every week for 4 months
  - ▶ Two booster sessions at months 5 and 6
- ▶ Modules
  - ▶ Psycho-education, motivational interviewing
  - ▶ Adherence training
  - ▶ Cognitive restructuring
  - ▶ Relaxation training & diaphragmatic breathing
- ▶ Train local non-professionals to deliver the treatment



# Nuevo Dia: Methods

- ▶ Recruited depressed and non-adherent patients from La Fe HIV Primary Clinic
- ▶ Randomized to 6-month treatment or usual care
- ▶ Outcome measurement: EDM to measure adherence
- ▶ Assessed depression with self-report (BDI) and clinical interview (MADRS)
- ▶ Baseline, post-intervention, 3-month follow-up



# Nuevo Dia: Results

Compared to standard of care, participants in the intervention arm demonstrated

- ▶ Reduced depression based on assessment (BDI) and clinical interview (MADRS)
- ▶ Improved self-report adherence



# Nuevo Dia: Implications

- ▶ Can adapt an intervention developed and tested in a White, Western context for Latinos on the border
  - ▶ Intervention feasible, with high interest and low attrition
- ▶ Must consider context: stigma of HIV and homosexuality, importance of family and religion, multiple other stressors
- ▶ Can train graduate students to implement



# Project ARC

## ART Adherence Research in China

- ▶ Collaboration among:
  - ▶ University of Washington
  - ▶ China CDC
  - ▶ Beijing Ditan Hospital
- ▶ Supported by NIMH R34 MH074364 & MH074364-S1
- ▶ PI: Jane Simoni
- ▶ 2005-2008



# Project ARC: Intervention

- ▶ Based on qualitative interviews with patients and caregivers, designed a culturally sensitive, theoretically-driven, and reproducible nurse counseling program to improve ART adherence
- ▶ An RCT compared minimal vs, enhance care

## Minimal Intervention

- ▶ Referral to community support
- ▶ Pill box
- ▶ 30-min basic HIV & ART edu

## Enhanced Intervention

Minimal intervention, plus:

- ▶ Electronic reminder
- ▶ Indiv/dyadic LIFE Steps counseling (Safren)



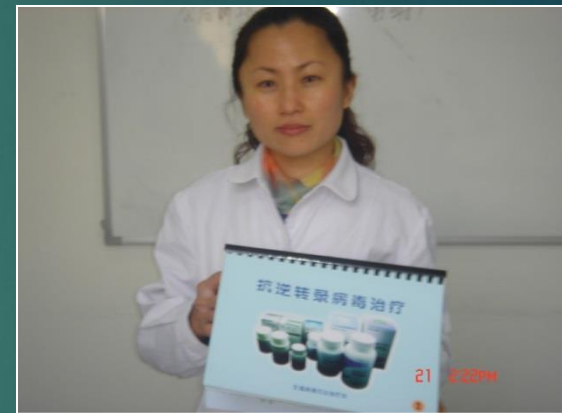
# Project ARC: Intervention

Components of the enhanced intervention included:

- ▶ Benefits of adherence (to increase motivation)
- ▶ Definition of adherence
- ▶ General education about HIV medications and adherence
- ▶ Patient's own HAART Regimen
- ▶ Dispensing of pills
- ▶ Daily medication scheduling and sorting
- ▶ Reminder strategies
- ▶ Dealing with side effects
- ▶ Communication with treatment team
- ▶ Getting to appointments
- ▶ Family, community, social support, and privacy
- ▶ Handling slips of non-adherence
- ▶ Problem-solving about additional barriers to adherence

# Project ARC: Methods

- ▶ 70 patients receiving primary HIV care at Beijing Ditan Hospital
- ▶ Participants were recruited through study nurse and provider referrals
- ▶ Data collection points:
  - ▶ Survey at baseline, 13 and 25 weeks
  - ▶ Phone survey at 7 and 19 weeks
- ▶ Outcomes Measurement:
  - ▶ EDM adherence data collected at 13 weeks and 25 weeks
  - ▶ Blood drawn for VL and CD4 at baseline, 13 weeks and 25 weeks



# Project ARC: Results



Compared to minimal intervention, enhanced intervention demonstrated:

- ▶ Better 30 day self-report adherence
- ▶ Better EDM adherence
- ▶ Notable decrease in viral load
- ▶ Slight increase in CD4 count



# Project ARC: Implications

- ▶ Can adapt a problem-solving and counseling intervention for Chinese HIV+ patients
- ▶ Nurses are receptive to training
- ▶ Chinese HIV+ patients will participate in adherence counseling individually or in dyads
- ▶ Technology can bolster intervention

***REDUCING PARENTAL  
HIV DISCLOSURE  
DISTRESS IN CHINA  
WITH NURSE-DELIVERED  
COUNSELING***

PI: J. Simoni  
R21HD07414  
2012-14

# INTERVENTION SESSIONS

## ■ Session 1

- Parents share HIV diagnosis story
- Brief assessment of parent, child, and family's current strengths
- Discussion of advantages and disadvantages (pros/cons) of disclosure
- Nurse provides didactic information about useful family communication skills, parents are asked to practice for homework

## ■ Session 2

- Psycho-education about cognitive, social, and emotional abilities of children at different stages of development
- Parents asked to imagine where they are on a disclosure ladder

## ■ Session 3

- Parents develop plan for achieving their position on the continuum, anticipate questions from child, troubleshoot and role-play the plan

# DISCLOSURE CONTINUUM HANDOUT FOR PARTICIPANTS

## 告知阶梯

10

- **完全告知：**  
完全告知病情，并且公开交流关于HIV的一切

- **大部分告知：**  
和孩子公开讨论HIV，并且告知他们你的病情。

- **重点告知：**  
直接告诉他们你有HIV，但是没有详细告知你的具体病情或愈后。（比如 CD4 指数，或发展成了AIDS）。

- **间接告知：**  
比如把药随手放，带他们去一个感染病诊所；或者别人告诉你的孩子，但是你们没有讨论过这个问题；或者你也不知道他们知不知道，但是你没有直接承认过。

- **部分告知：**  
告诉孩子你有个具体的病，比如血液病，肝炎，癌症。

- **含糊告知：**  
告诉孩子你有点健康问题（小病、大病、重病，所述严重程度可以自行决定）

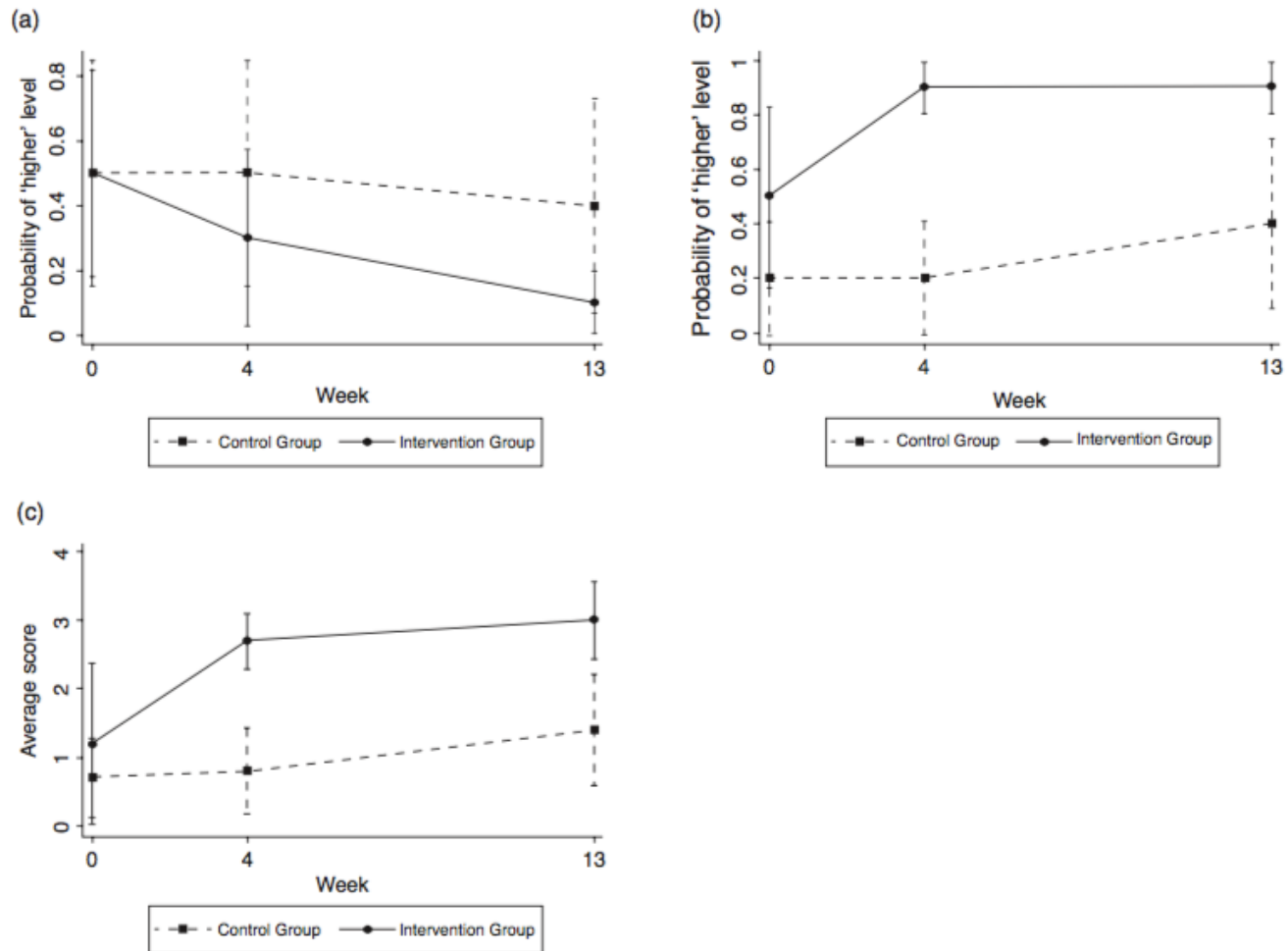
- **少量告知：**  
告诉了孩子一些关于HIV的大概知识。

0

- **无告知：**  
对孩子没有任何病情告知。

# INTERVENTION OUTCOMES

(N=20 PLWHA)



**Fig. 2. Adjusted outcomes over time by intervention groups.** (a) Disclosure distress. (b) Disclosure self-efficacy. (c) Disclosure Behaviours Continuum.

心理工具研究  
Psychology Toolbox



**Development and evaluation of a counseling intervention to reduce psychological distress for newly diagnosed persons with HIV and gay men in China**

# Intervention Contents

心理工具研究  
Psychology Toolbox



## Session 1

HIV diagnosis story

Unstructured assessment of mental health, disclosure, and coping skills

Teach **Automatic Thought Record** (ATR)<sup>40</sup> skill using example from qual data and participant's example

## Session 2

Review ATR homework

Explore avoidance patterns that resulted from having HIV

Teach behavioral activation **TRAP**<sup>41</sup>: trigger response avoidance pattern & **TRAC**: trigger response alternative coping skill

## Session 3

Review homework of taking steps to get out of a TRAP and on TRAC

Assess anxiety experienced as a result of HIV

Teach **Paced reathing**<sup>42</sup> skill and practice

## Mental health outcomes (N=10 MSM PLWHA)

	Baseline		Post Intervention				
Measure	<i>M (SD)</i>	Range	<i>M (SD)</i>	Range	<i>t (df = 9)</i>	<i>p</i>	Effect size <i>d<sub>z</sub></i> <sup>52</sup>
PHQ Depression	10.3 (6.8)	1-21	6.5 (3.6)	1-13	-2.62	.03	-.83
HIV Coping	20.3 (5.3)	15-24	26.1 (2.3)	22-31	5.16	.001	1.63
HIV Distress	25.6 (5.4)	18 - 36	23.2 (5.3)	17-34	-1.78	.11	-.56
BASE-6 Problems in Adjustment	20.3 (8.0)	6-31	14.3 (5.5)	7-22	-2.40	.04	-.76

<sup>52</sup>Lakens, 2013



# Turning to Sunshine

A Computer-based Program to Promote ART Adherence, Mental Health, and Treatment Engagement among PLWHA in China: Development and Initial Acceptability

- ▶ NIMH K24 MH093243
- ▶ PI: Jane Simoni
- ▶ 2011-2014

# Turning to Sunshine: Intervention

- ▶ Intervention modules draw from behavioral therapy, behavioral activation, and problem-solving strategies (see <http://tinyurl.com/turningsunshine>)

**情绪评估**

在过去七天里，您受以下任何问题困扰的频率如何？  
回答请屏幕上的所有问题，然后点击“提交”。

	很少或 没有时间 (不到1天)	一些或 一点时间 (1-2天)	很多或 经常 (3-4天)	大部分或 所有时间 (5-7天)
1. 没有兴趣或不乐意做事情	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
2. 感到情绪低落、沮丧或绝望	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. 入睡或保持睡眠有困难，或者睡得太少	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. 感到疲劳或者没有精神	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
5. 胃口不好或饮食过量	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
6. 对病已感到厌烦：感觉自己是个失败者或让家人失望	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
7. 您事情不能集中注意力，如读报或看电视	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
8. 走路或做事很慢，比别人注意（或者相反，比通常情况下走路的时间多得多）	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
9. 想到自己最好去死或者以某种方式伤害自己	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>


**Not Alone**

On this screen, you have the chance to read the stories of four individuals living with HIV and to explore their experiences.



Liang Li      Jin Hai      JaiYing      Meilin

When you are finished exploring, select the Next button to continue. You will need to read at least one story before you may continue.



- Complete the problem-solving worksheet
- Consider all possible solutions to the problem you have chosen
- Remember, if a solution seems overwhelming, try to break it down into simpler tasks
- Use additional copies of the sheet if needed
- Remember to bring your worksheet back with you on your next visit

Select the Next button to continue.



感染 HIV 后好好生活：简介



放松策略：有节奏的呼吸



消极思想、情绪和行为：  
打破循环



选择有价值的生活



问题解决方法



服药：生活步骤



公布您的 HIV 诊断结果



结束语

# InfoPlus Adherence

## Provider-Delivered Electronic Medication Record (EMR) Alert-based ART Adherence Counseling Program in Haiti

- ▶ NIMH R34 MH112378
- ▶ MPI: Nancy Puttkammer, Jane Simoni
- ▶ 2016-2019
  
- ▶ Purpose: develop and test a clinic-based EMR and counseling intervention to address ART adherence in Haiti



# InfoPlus Adherence: Intervention

## ▶ 1. EMR-Based Alert

- ▶ Alert with 6 levels of color coding to appear on patient cover page of EMR
- ▶ Pop-up window with visual summary of recent ART medication possession, and job aide on counseling approach
- ▶ Printable summary report listing patients with high risk or evidence of treatment failure

<b>Success</b>	Has completed a viral load test within the past 90 days with a returned test result of $<1000$ cellules/mm <sup>3</sup> .
<b>Minimal Risk</b>	Low score on risk algorithm for future treatment failure.
<b>Medium Risk</b>	Medium score on risk algorithm for future treatment failure.
<b>High Risk</b>	High score on risk algorithm for future treatment failure
<b>Failure (Immunologic)</b>	Patient has met immunologic criteria for ART failure based on CD4 testing.
<b>Failure (Virologic)</b>	Patient's most recent two viral load tests, done within 190 days of each other, have both returned test results of $\geq 1000$ cellules/mm <sup>3</sup> .

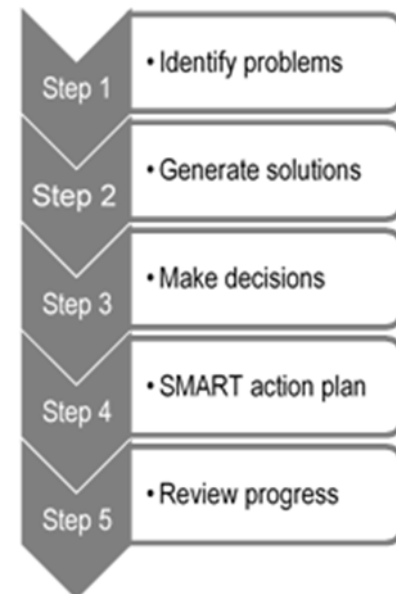
# InfoPlus Adherence: Intervention

## ▶ 2. ART adherence counseling

- ▶ “My Adherence Stories” builds on the strengths of Haitian culture, including the strong oral tradition in Creole-speaking communities
- ▶ Values the communication of personal narratives (Good Day/Bad Day) over the completion of structured modules
- ▶ Emphasizes patient-centered communication and problem-solving approach

***Everyone has their stories about taking their HIV medications. Today I want to hear yours. Then we'll work together to identify the main problem making it hard for you to take every dose every day...***

Figure 2: 5-step Problem Solving Model



# InfoPlus Adherence: Methods

- ▶ Qualitative methods for formative assessment of provider and patient beliefs and attitudes toward the intervention (see figure)
- ▶ 9-month quasi-experimental design
- ▶ 2 large public-sector ART clinics: Port-au-Prince (control) and Cap Haitien (intervention)
- ▶ 65 patients each site initiating ART
- ▶ Outcome measurement:
  - Retention in care
  - ART adherence
  - ART treatment failure by WHO criteria
  - HIV viral suppression



# *InfoPlus* Adherence: Results

Coming soon . . .





# *Shikamana* Intervention

Supporting ART Adherence and Care Engagement for Kenyan MSM

- ▶ NIMH R34 099946
- ▶ PI: Susan Graham  
Co-I: Jane Simoni
- ▶ 2012-2015



# *Shikamana*: Intervention

- ▶ Based on focus group discussions, developed peer support intervention to improve ART adherence among HIV+ MSM in Kenya
- ▶ RCT enrolled 60 men assigned to the *Shikamana* intervention vs. standard care (informational counseling with no assigned peer) for 6 months of follow-up

# Shikamana: Intervention

- ▶ **Sensitivity training.** All *Shikamana* clinicians and counselors took a free on-line training course on MSM sexual health.
- ▶ **Patient-centered care.** This approach focuses on developing goals of care with the patient, to enhance patient motivation.
- ▶ **Motivational Interviewing.** Next Step Counseling, used to promote PrEP adherence in iPrEx, was adapted to the Kenyan context.
- ▶ **Peer support.** *Shikamana* peers were HIV-positive men with ART experience who were trained to provide support and meet with men monthly. Based on Project PAL.
- ▶ **Mental health screening and support.** Counselors and peers trained to recognize mental health problems and refer as needed.

# Shikamana: Methods

- ▶ Enrolled 60 Kenyan MSM into RCT
- ▶ Block randomization by ART status (experienced vs. naïve), with men selecting own envelope from relevant stack
- ▶ Monthly ART refills with adherence data collection by self-report measures and MEMS caps
- ▶ Quarterly blood draw for CD4 count and viral load testing
- ▶ Quarterly ACASI measures of IMB constructs, self-efficacy, trust in providers, social support, stigma, mental health
- ▶ Staff and peers (*Washikaji*) provided formal feedback at exit interviews

# Shikamana: Results

- ▶ MEMS data on 59/60 participants (98.3%)
- ▶ Of 375 refill visits, MEMS collected on 290 (77.3%)
  - ▶ MEMS bottle forgotten, lost, misplaced
- ▶ Pills remaining at visit: median 3, range 0-31
- ▶ In GEE analysis with adjustment for baseline suppression (<40 copies/mL), **men in the intervention group had an increased odds of virologic suppression at months 3 and 6, as did men with virologic suppression at baseline** (aOR, 5.7, 95% CI 1.1-30.7, p=0.04), (aOR 23.0, 95% CI 2.7-196.7, p=0.004)

# *Shikamana*: Conclusions

- ▶ The *Shikamana* intervention appears to be safe, acceptable, and feasible
- ▶ MEMS data capture was complicated in this population
- ▶ Results suggest that *Shikamana* may increase ART adherence among Kenyan GBMSM
- ▶ A larger trial to evaluate efficacy is needed
- ▶ A combined provider and peer support approach may also improve PrEP adherence in this population

# Motivation Matters!

- ▶ Supported by GRANT NUMBERS
- ▶ PI: Scott McClelland, Co-I: Jane Simoni, Trainee: Frances Aunon
- ▶ 2015-present



# Motivation Matters!: Intervention

- ▶ Develop an interactive, theory-informed SMS intervention to improve ART adherence and reduce VL among newly diagnosed HIV+ female sex workers (FSW) in Kenya
- ▶ Conducted focus group discussions with HIV+ FSW to create and refine SMS content and structure
- ▶ 2-3 messages sent per week, focusing on providing information, motivation and behavioral suggestions

## **Standard of Care Condition**

- Monthly ART refills and counseling
- VL and CD4 every 3 months
- Followed for 6 months

## **Intervention Condition**

Standard of care, plus:

- SMS messages for 6 weeks



# Motivation Matters!: Methods



- ▶ Enrolled 120 HIV+ FSW newly initiating ART treatment
- ▶ Randomized for 6-month treatment or standard of care
- ▶ Outcome measurement: self-report, VAS, pill count, VL, CD4 (assessed at baseline, 3 month, and 6 month)
- ▶ Meet monthly with counselors for ART refill
- ▶ Conducting a social network assessment at baseline to understand how network characteristics (including social support and stigma) may moderate the impact of the intervention on ART adh/VL

# Motivation Matters: Results



▶ Stay tuned!

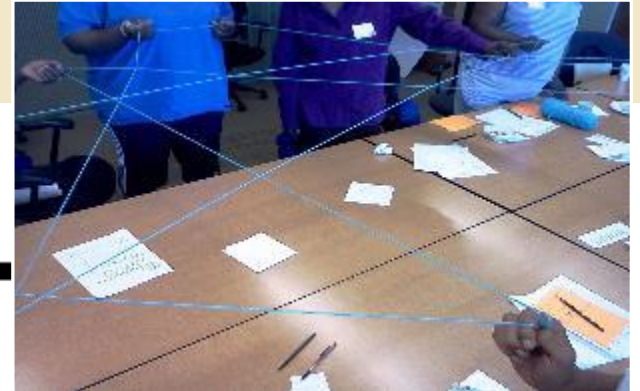
# Reducing Stigma

- **Societal/structural level<sup>1,2</sup>**
  - Removal of institutional stigmas (e.g. ADA)
  - Economic independence → microfinance programs
  - Community organizing
  - Contact between stigmatized and potential/actual perpetrators of stigma
- **Individual level<sup>3,4</sup>**
  - Education/Information
  - Coping Skills Acquisition
  - **Contact with peers → Social Support**

<sup>1</sup>Link & Phelan, 2001; <sup>2</sup>Sen, 1995; <sup>3</sup> Brown, Trujillo, Macintyre, 2001

# The UNITY Health Study

EPIDEMIOLOGY



## Stigma Reduction Among African American Women With HIV: UNITY Health Study

*Deepa Rao, PhD, MA,\* Christopher G. Kemp, PhDc, MPH,† David Huh, PhD,‡ Paul E. Nevin, MPH,† Janet Turan, PhD, MPH,§ Susan E. Cohn, MD, MPH,|| Jane M. Simoni, PhD,¶ Michele Andrasik, PhD,\*\* Yamile Molina, PhD,†† Michael J. Mugavero, MD,‡‡ and Audrey L. French, MD§§*

# Methods

- **Setting**
  - Chicago (Private & Public Hospital Clinic)
  - Birmingham (University Hospital Clinic)
- **Randomized Controlled Trial Design**
  - UNITY workshop vs. Breast Health workshop
  - Mixed Effects Regression
  - Data collected May 2013 to December 2016
- **Participants**
  - African American women over the age of 18
- **Self-reported data**
  - Primary Outcome → 14-Item Stigma Scale for Chronic Illness (SSCI)
  - Baseline, post-intervention, 6, 8, 10, and 14 months

# Concurrency messaging for Black Communities: A Community-based Approach

*Michele P. Andrasik, UW*

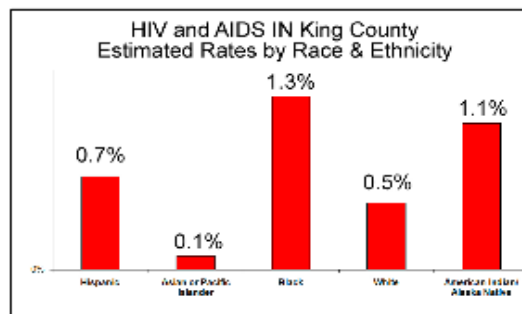
To translate research on sexual networks and concurrency into culturally-relevant HIV prevention messages for the African-American and African-born communities in Seattle and King County.



# Translating Concurrency: Educational Sheet

## An Overview of HIV Statistics & Concurrency

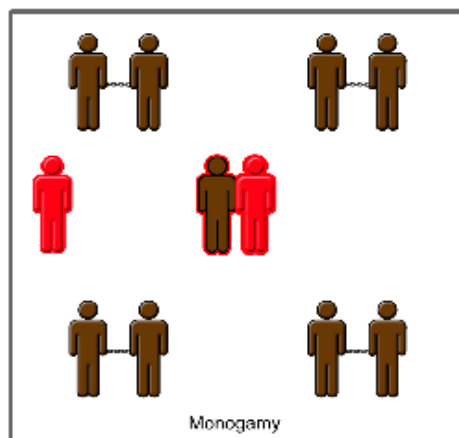
### 1. Local Data\*



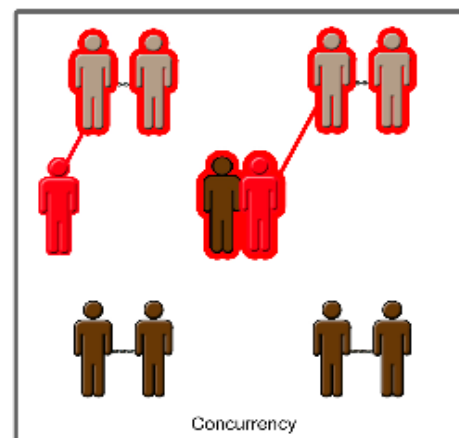
Black people living in King County are 2.7 times more likely than whites to be living with HIV.

### 2. What is concurrency?

Concurrency is when individuals have a sexual relationship with more than one person over the same period of time. This means that someone has more than one partner that they engage in sex with at the same period of time. Those sexual partnerships are happening concurrently and create a greater risk for contracting HIV.



Number of potential new infections = 1



Number of potential new infections = 5

### 3. Concurrency: A Ugandan Approach

#### "ZERO GRAZING"

- a media campaign slogan from Uganda's early AIDS Control Program (launched in 1986).
- Refers to the agricultural practice of tying livestock to a post, restricting them to a zero shaped section of grass.
- Contributed to the decline of HIV prevalence in Uganda — from an estimated 15% in the early 1980's to 4% in 2003 (UNAIDS, 2004)



\*Concurrency Communication\* is a project developed in partnership with the UW Center for AIDS Research Community Action Board (CAB) and is funded by the National Institutes of Health (NIH). \*Local HIV rates provided by Public Health - Seattle & King County.

# Developing the Flyers



Blacks, 18-50, in Kings County:  
0,000.

With HIV or AIDS:  
000.

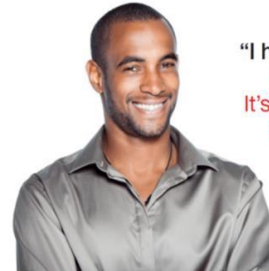
What are you doing about it?  
Condoms. Testing. Talking. *It's that easy.*



As a black woman,  
I'm at risk for HIV.

But when I share my boo,  
my risk triples.

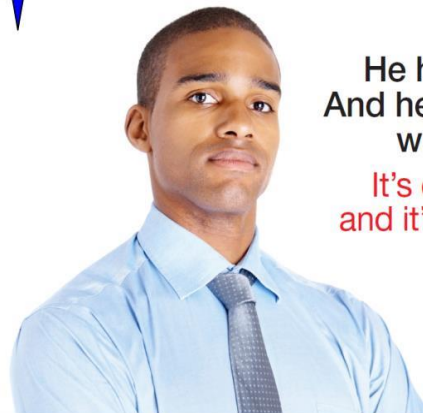
So it's me or her,  
but not at the same time.



"I have two girlfriends.  
I like them both."

*It's called concurrency,  
and it's killing us.*

stop  
AIDS [stop  
concurrency  
.org](http://stopconcurrency.org)



He has two girlfriends.  
And he has unprotected sex  
with both of them.

*It's called concurrency,  
and it's spreading infection.*

stop  
HIV/AIDS [stop  
concurrency  
.org](http://stopconcurrency.org)

Paid for by UW Center for AIDS Research (CFAR).  
Professional model. Used for illustrative purposes only.



# Path Forward

- Biomedical → bio-behavioral
- Interdisciplinary research

# NIH Priorities

- (1) Reducing the incidence of HIV/AIDS;
- (2) Developing the next generation of HIV therapies;
- (3) Identifying strategies towards a cure;
- (4) Improving the prevention and treatment of HIV-associated comorbidities, coinfections, and complications; and
- (5) Cross-cutting areas that includes basic research, **behavioral and social sciences research**, health disparities, trainings, capacity-building, and infrastructure.

## The functional framework for HIV/AIDS behavioral and social science research by Gaist and Stirratt (2017, JAIDS)



Basic BSSR	Understanding vulnerable populations and risk settings
Elemental BSSR	Improving behavioral and social factor risk reduction
Supportive BSSR	Strengthening biomedical HIV product development and clinical trials
Integrative BSSR	Contributing to effective implementation of combination/multilevel strategies

## The “Uncharted Frontier” of Medicine

*New drugs and treatments won't work if we don't simultaneously target human behavior, (for which we have) no marker, no biopsy, no powerful predictive test.*

*Doctors need experimental tools to understand, survey, and change medicine's least familiar frontier:  
human behavior.*

Siddhartha Mukherjee, MD  
NY Times, 5/20/2018

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- ▶ Participants



Thank You



For more information, slides, or to join the  
HIV Medication Adherence Listserv

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