BIO-BEHAVIORAL INTERVENTIONS FOR SMOKERS LIVING WITH HIV
Thanks... The Organizers
ACKNOWLEDGMENT
1. **SMOKING PREVALENCE**
   Compare smoking prevalence in people with and without HIV.

2. **PRIORITY GROUPS**
   Articulate the reasons why smokers with HIV are a priority group.

3. **INTERVENTIONS FOR SMOKING CESSATION**
   Describe why tailoring and combination therapy is needed.

4. **RATIONALE BEHIND PATCH**
   Understand the rationale behind PATCH design.
INTRODUCTION
Why Is Tobacco Cessation Among PLWHA Now a Public Health Priority?
Problems
Prevalence of Smoking in Metropolitan Areas by HIV Status

- SF (n=228)
- NYC (n=428)
- Houston (n=348)
- Florida
- General Population

[Bar chart showing smoking prevalence by HIV status in different metropolitan areas.]

Prevalence of Smoking in Metropolitan Areas by HIV Status

SF (n=228) | NYC (n=428) | Houston (n=348) | Florida | General Population
---|---|---|---|---
Polysubstance | HIV- | Polysubstance | HIV- | Polysubstance | HIV-
Types of Cigarettes

General Population

PLWHA

Mentholated

Non-Mentholated
Cotinine Levels by HIV Status & ART

- HIV (-)
- HIV + ART -
- HIV + ART+

90% ART
Cotinine Levels by HIV & Gender

P = 0.02
As dire as the health risk appears for the general population of smokers, the impact of smoking among PLWH is significantly higher.
When compared with the general population PLWHA are more susceptible to tobacco-related illnesses such as:

- Cardiovascular disease
- Cancer (3-5 increase risk)
- Pulmonary disease (COPD, bronchitis)

Despite similar ART adherence (90% vs. 80%), smokers were twice more likely to fail at achieving undetectable viral loads (OR=1.4; 95% CI 1-2.1, p=0.04).
PLWHAs are losing more years to smoking than to HIV.

1. They lose over six years of life expectancy.
2. Approximately 61% of deaths can be attributed to smoking.¹
3. The chance of non-AIDS-related death is 5 times greater for PLWHA who smoke compared to those who never smoked.

SOLUTION- Trials
There is a paucity of controlled trials among PLWH.

INTERVENTION CHALLENGES

- Risk Perception
  - HIV & Menthol
- Withdrawal Discomfort
  - Levels of Nicotine
- Gaining Weight
INTERVENTIONS

BEHAVIORAL
Motivational
Cognitive Behavioral

PHARMACOTHERAPY
Bupropion
Varenicline
Nicotine Replacement
Quit Lines & Cell Phone Interventions may be effective however many are low income and lack access to continuous telephone service.
Health Professional advice
Something said by family/friends
Someone else stopping
Smoking restrictions
Nicotine Replacement Therapy ad
Government ad
Health warning
Just decided
New treatment
Are physicians doing smoking cessation interventions?

21% Yes

79%

38 Primary Care Practices

Why Not?

1. Before the data was contradictory
2. Considering the complexity of HIV management
3. Smoking cessation was a low priority
4. They have not been trained
5. Reimbursement
WHAT HAVE BEEN DONE IN THE PAST
Interventions for PLWHA

Multifaceted Interventions: Combination of motivational interviewing/counseling techniques and pharmacotherapy. 

Varying Degrees of Tailoring, and the distribution of smoking-cessation self-help materials. 

Use of Technology: Internet or Cell Phone 

The use of theory to develop smoking-cessation interventions was limited.

Cui et al., 2012; Elzi et al., 2006; Fuster et al., 2009; Ingersoll et al., 2009; Lloyd-Richardson et al., 2009; Moadel et al., 2012; Vidrine et al., 2006 and 2012.
Quit rates of 10 prior randomized trials conducted with PLWHA or a combination, yielded quit rates ranging from 4% to 16%.

Cui et al., 2012; Elzi et al., 2006; Fuster et al., 2009; Ingersoll et al., 2009; Lloyd-Richardson et al., 2009; Moadel et al., 2012; Vidrine et al., 2006; Vidrine et al., 2012. Chew D
SUMMARY

- High Prevalence
- Vulnerability
- Biological Differences
EXAMINING PATCH
PATCH ADDRESSING THE NEEDS OF PLWH

✓ SPECIFIC KNOWLEDGE
✓ TIME (Adapt & Convenient)
✓ SUPPORT
✓ NICOTINE LEVELS
EXAMINING PATCH

Behavior
- Standard

Pharmaco
- No Pre-Load
- 10 Weeks
- # of Cigarettes/day

Behavior
- Tailored HIV Information

Pharmaco
- Pre-Load
- 12 Weeks
- Algorithm
PHARMACOTHERAPY

Buproprion  Side effects, interference with Varenicline  ART

Nicotine Replacement
Cotinine Levels by HIV Status & ART

- HIV (-)
- HIV + ART -
- HIV + ART +
PHARMACOLOGICAL
Assess for Eligibility

N=625

Randomization

Standard Arm n=160

- 1 Month Follow-up
- 3 Month Follow-up
- 6 Month Follow-up
- 12 Month Follow-up

Randomization

Tailored Arm 160

- 1 Month Follow-up
- 3 Month Follow-up
- 6 Month Follow-up
- 12 Month Follow-up
Flyers, 19%

Own Cohorts & Active Recruitment, 30%

Referrals, 51%
STUDY POPULATION
INCLUSION CRITERIA

HIV +

SMOKERS (DAILY)

READY TO QUIT (Quit ladder 7)

EXCLUSION LIMITED TO

SAFETY, COMPLIANCE AND

MAJOR CONDITIONS
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<th>Arm 1</th>
<th>Arm 2</th>
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<td>Female</td>
<td>48%</td>
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<tr>
<td>Other</td>
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</tr>
<tr>
<td>Income</td>
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<tr>
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<tr>
<td>&gt;30K</td>
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STUDY POPULATION

320 smokers with HIV who were motivated to quit.
PRIOR ATTEMPTS

26% Never

40%
Some tobacco researchers have proposed that initiating NRT prior to the quit date increases the odds of quitting smoking. Results are mixed.

None of those studies were performed among PLWH.
REDDUCING IS ALSO A SUCCESS HISTORY
LIMITATIONS
QUITTING SMOKING BARRIERS

STRESSORS: Family, interpersonal, traumatic life events

SUPPORT: Partner is a smoker not ready to quit
Advantages
• Neutral PH
• More Rapid
• Adjunct

Disadvantages
• Taste
• Poor Dental Health
• Sore Jaw
TEAM EFFORT

• CLERY QUIROS
• DIEGO BUENO
• ZIPPORAH THOMPSON
• CALONIE GRAY
• CHRISTOPHER KHALER
• CASSANDRA STANTON
Thank You