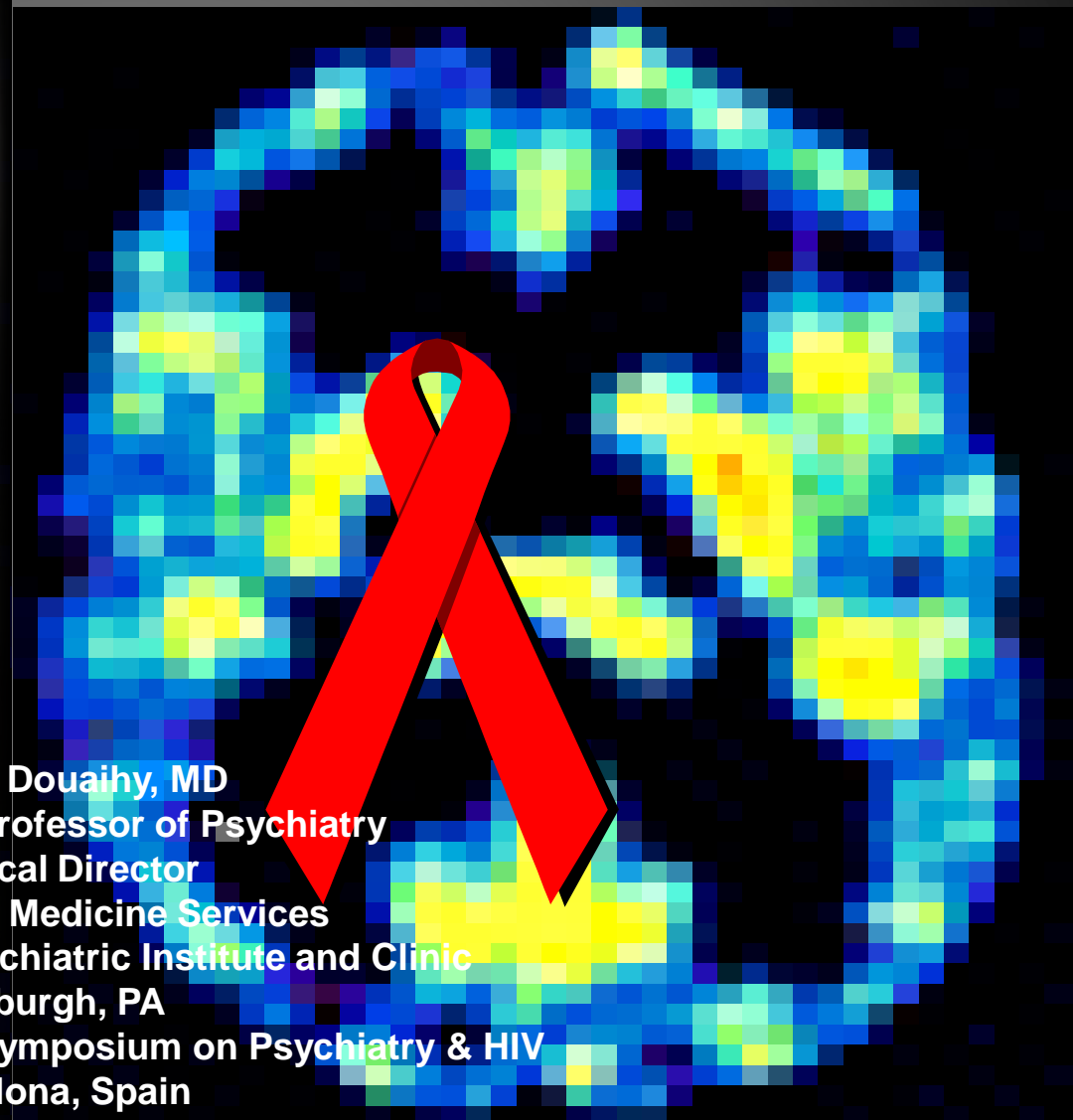
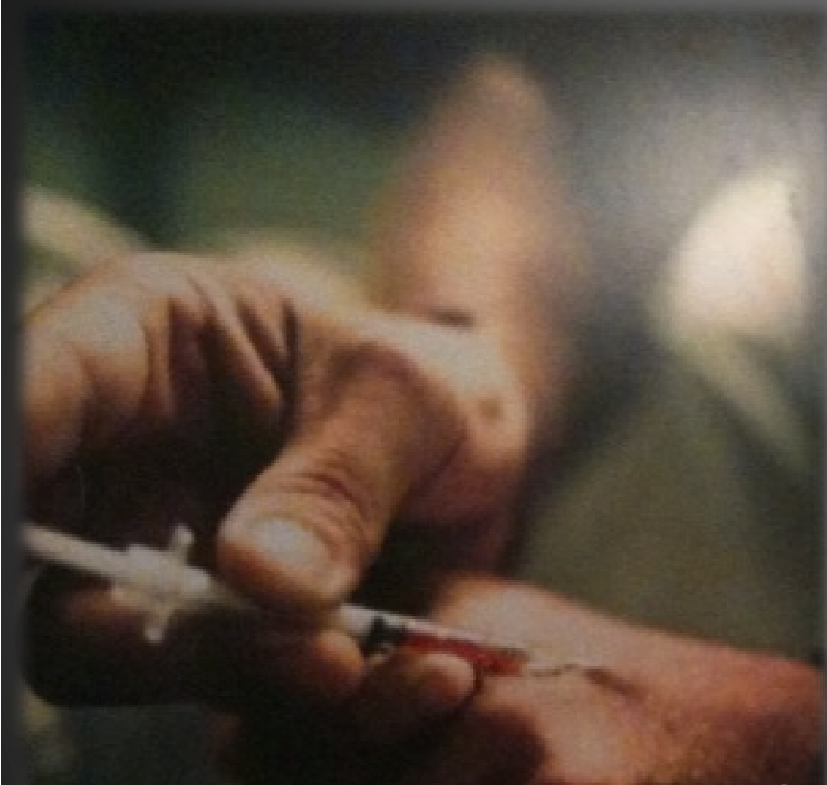


4th International
Symposium on



Barcelona, May 5th and 6th 2011

HIV/AIDS & Substance Use Disorders: **Translating Research Into Clinical Practice**



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4th International Symposium on Psychiatry & HIV
Barcelona, Spain
May 5th, 2011

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The HIV-Drug Use Syndemic

U.S. Population

HIV-infected Population

8.3% of U.S. with
current drug use¹

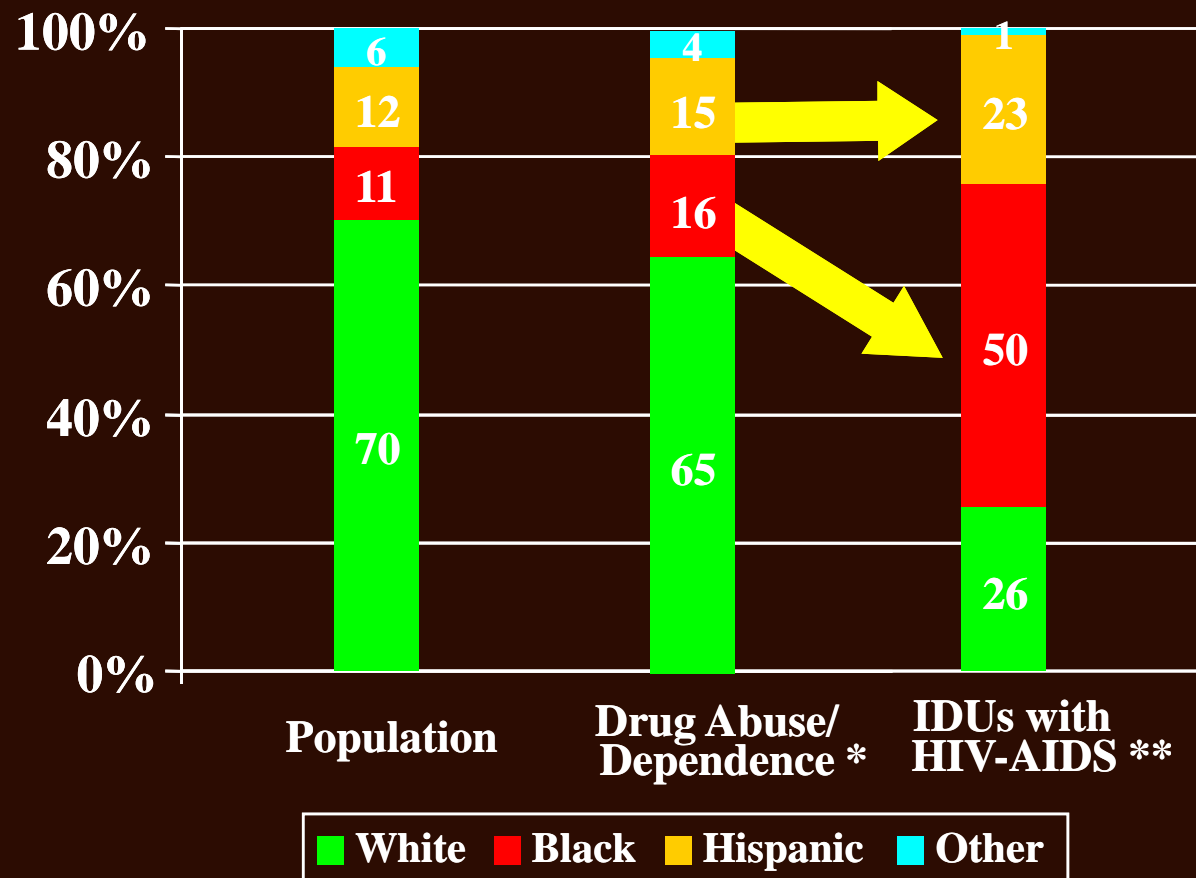
36% HIV-infected with
current drug use²

¹2006 NSDUH survey

²Korthuis JSAT 2008

NIDA Priorities in HIV/AIDS Research: Minority Populations

HIV/AIDS Disproportionately Affects Minority Populations



Sources: * 2002 NSDUH, DHHS, SAMHSA, 2003.
** CDC HIV/AIDS Surveillance Report 2002.

Illicit Drug Use in HIVRN

	<u>Current Use</u> (n=951)
Amphetamines	23 (2)
Analgesics	54 (6)
Cocaine	90 (10)
Hallucinogens	2 (0.2)
Heroin	28 (3)
Inhalants	27 (3)
Marijuana	241 (26)
Sedatives	48 (5)
≥ Substances	144 (15)

HIV and Drug Abuse (HCSUS)

- 24% of HIV-infected Americans report h/o IVD as only HIV exposure risk
- 46% reported h/o drug abuse
- 9% reported h/o drug dependence
 - Lower odds of receiving ART (aOR=0.4, 95% CI .27-.59)¹

¹Turner, JGIM 2001;16:625

Patients with Co-existing HIV Infection & Drug Use

- Are less likely to:
 - Receive ART¹
 - Have viral load testing²
 - Adhere to ART³
 - Receive lipid screening⁴
- Are more likely to:
 - Experience HIV-related symptoms⁵
 - Have higher hospitalization rates⁶
 - Have decreased quality of life⁷
 - Die⁸

¹ Anderson R, HSR 2000

² Laine C, JAIDS 2003

³ Lawrence P, HIV Med 2007

⁴ Korthuis JAIDS 2004

⁵ Mathews WC Med Care 2000

⁶ Fleishman JA, Med Care 2005

⁷ Korthuis AIDS Pt Care (in press)

⁸ Wood CMAJ 2003

Interrupting Drug Related HIV Transmission

- Harm Reduction
 - Syringe exchange reduce HIV transmission risk by estimated 33-42%¹
- Treatment of Underlying Drug Use Disorders
 - Substance abuse treatment doubles HIV rx²
 - Decreases risk of HIV seroconversion³

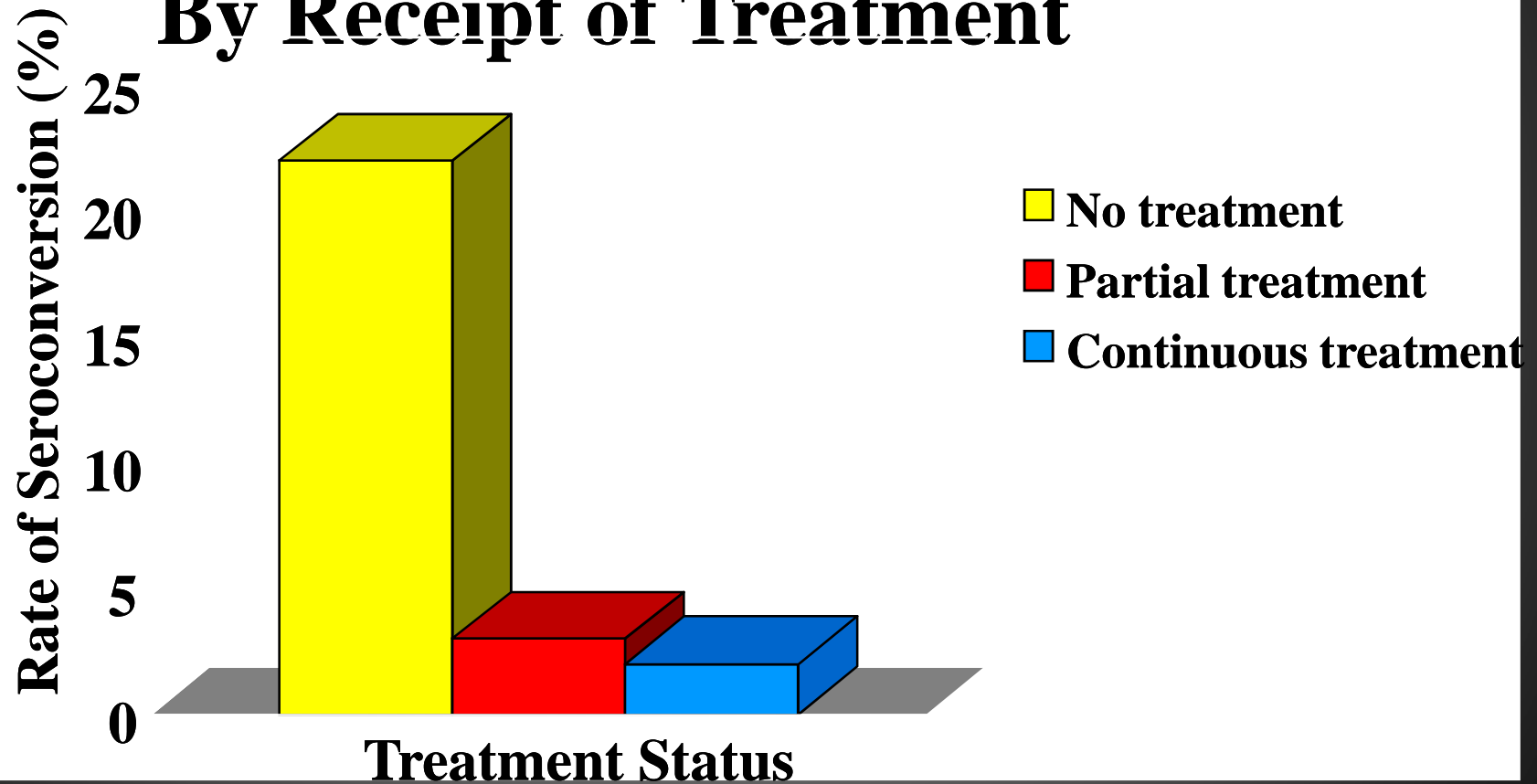
¹Wodak, Subst Use Misuse 2006

²Strathdee, JAMA 1998

³Metzger, 1993

Among IDUs the Most Effective HIV/AIDS Prevention Strategy is *Drug Abuse Treatment*

HIV Seroconversion at 18 Months By Receipt of Treatment

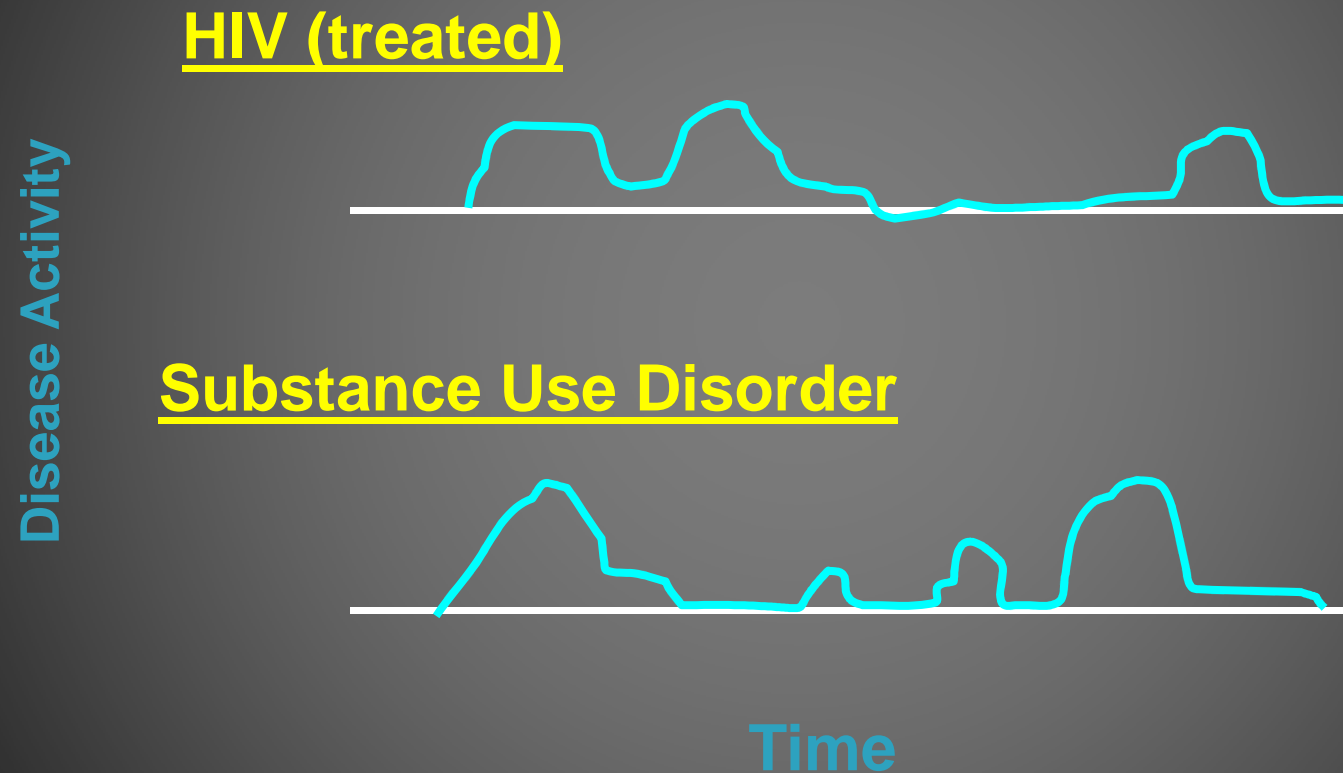


Source: Metzger, D. S., Woody, G. E., McLellan, A. T., O'Brien, C. P., Druley, P., Navaline, H., De Philipps, D., Stolley, P., & Abrutyn, E. (1993). Human immunodeficiency virus seroconversion among intravenous drug users in- and out-of-treatment: An 18-month prospective follow-up. *Journal of Acquired Immune Deficiency Syndromes*, 6, 1049-1056.

Approach to Substance Use in HIV Clinic Settings

- Refer for substance use treatment
- Discussing substance use
- Discussing co-occurring psychiatric and medical issues
- Office-based treatments

HIV and Substance Use: Two Chronic Care Conditions



O'Connor, JAMA 1998
Lucas, JAIDS 2005

Discussions of Substance Use & Receipt of Substance Abuse Treatment

(n=696 Current or Former Users)

	<u>N (%)</u>	<u>Substance Use Treatment aOR (95% CI)*</u>
Discussed Substance Abuse with Provider:		
No	382(54%)	1.0 (ref)
Yes	314(46%)	2.12 (1.31-3.41)

*Adjusted for site, sex, IDU, emplymt, race, insurance, visits, CD4, drug use severity

Korthuis, JSAT (in press)

Enhancing Communication & HIV Outcomes (ECHO) Study

- Setting: HIV clinic sites in Detroit, New York, Baltimore, and Portland
- Participants: 45 providers (82%), 414 patients (73%)
- Goal: Assess the quality of communication among HIV-infected patients with drug and alcohol use.
- Data Collection & Analysis:
 - Patients surveyed about substance use and asked to rate their provider's communication skills following visit
 - Audio-recordings coded for specific provider and patient communication behaviors

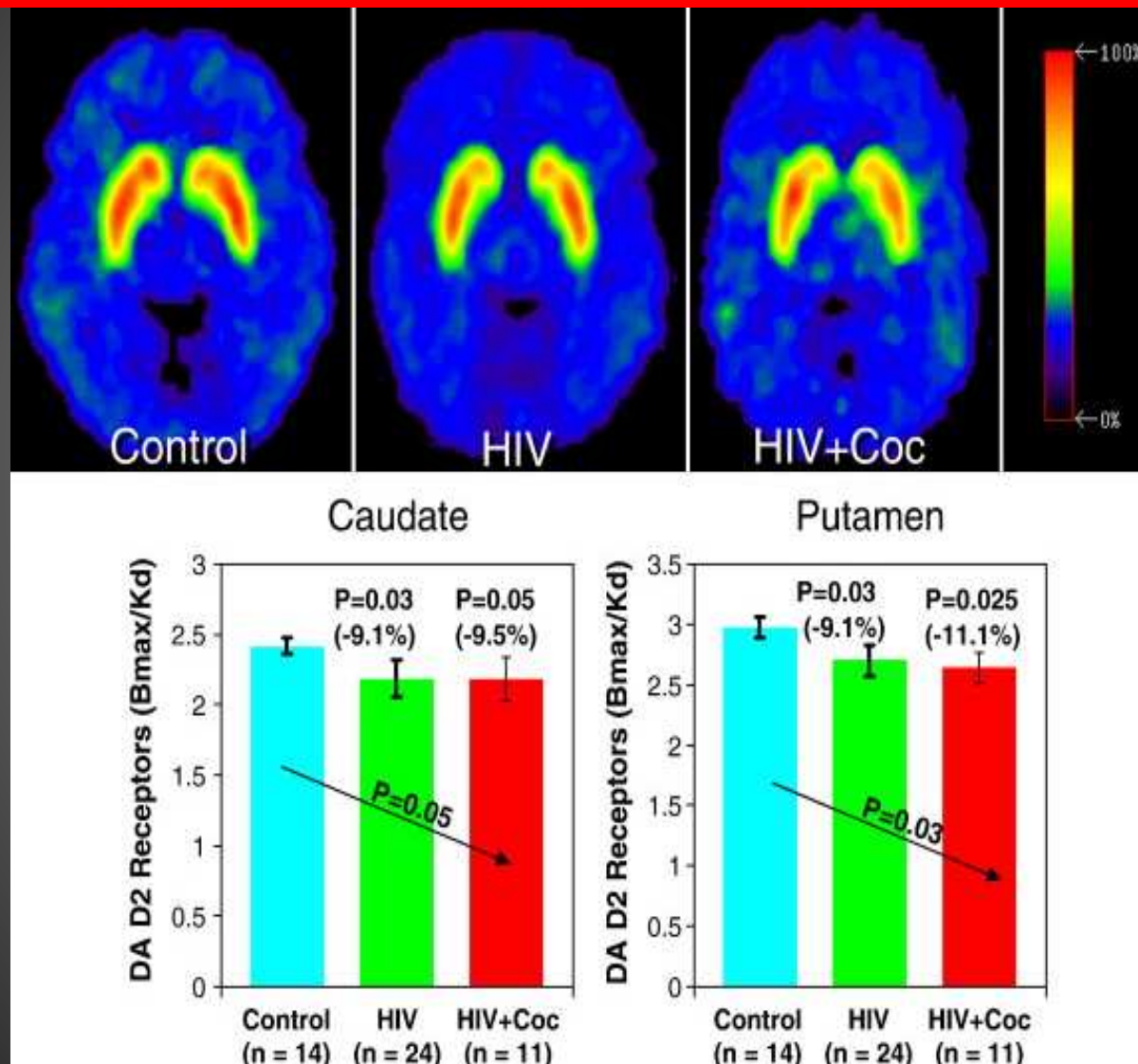
Summary of ECHO Findings

- Communication was less favorable for current alcohol users
 - Providers
 - Spend less time talking
 - Make fewer psychosocial-counseling statements
 - Patients
 - Less engaged
 - Rate provider communication quality lower
 - Are less satisfied with care
- Illicit drug users both give & receive more communication but rate provider communication no differently than non-users

What are the Mechanisms Underlying the Relationship Between Drug Use and HIV/AIDS?

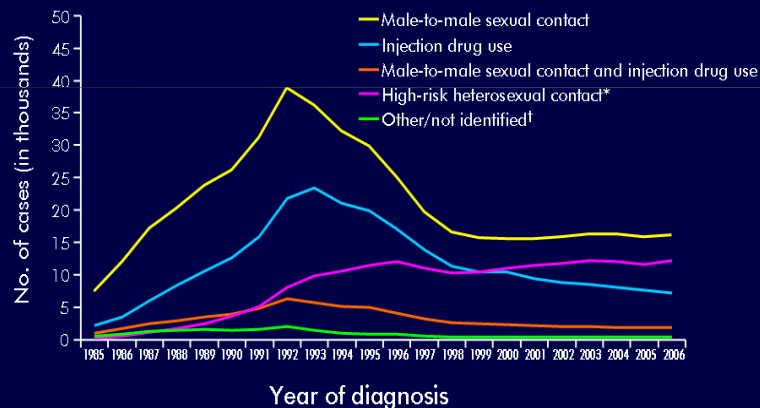
- *Acute Drug Effects*
 - Drug Intoxication and Decision Making
- *Chronic Drug Effects*
 - Disruption of Inhibitory Control
- *Interaction of Drugs and HIV*

Some Psychoactive Drugs Exacerbate Neurotoxic Effects of *HIV*



Drug Use Has Played A Major Role in HIV Transmission

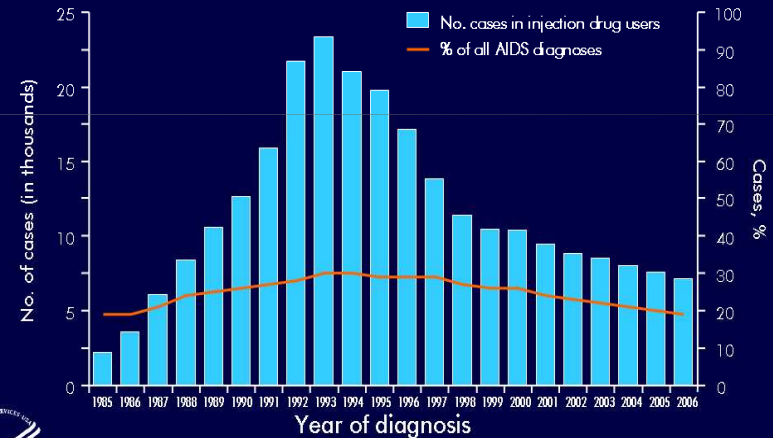
Estimated Number of AIDS Cases among Adults and Adolescents, by Transmission Category 1985–2006—United States and Dependent Areas



Note. Data have been adjusted for reporting delays, and cases without risk factor information have been proportionally redistributed.
 *Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.
 †Includes hemophilia, blood transfusion, perinatal, and risk factor not reported or not identified.



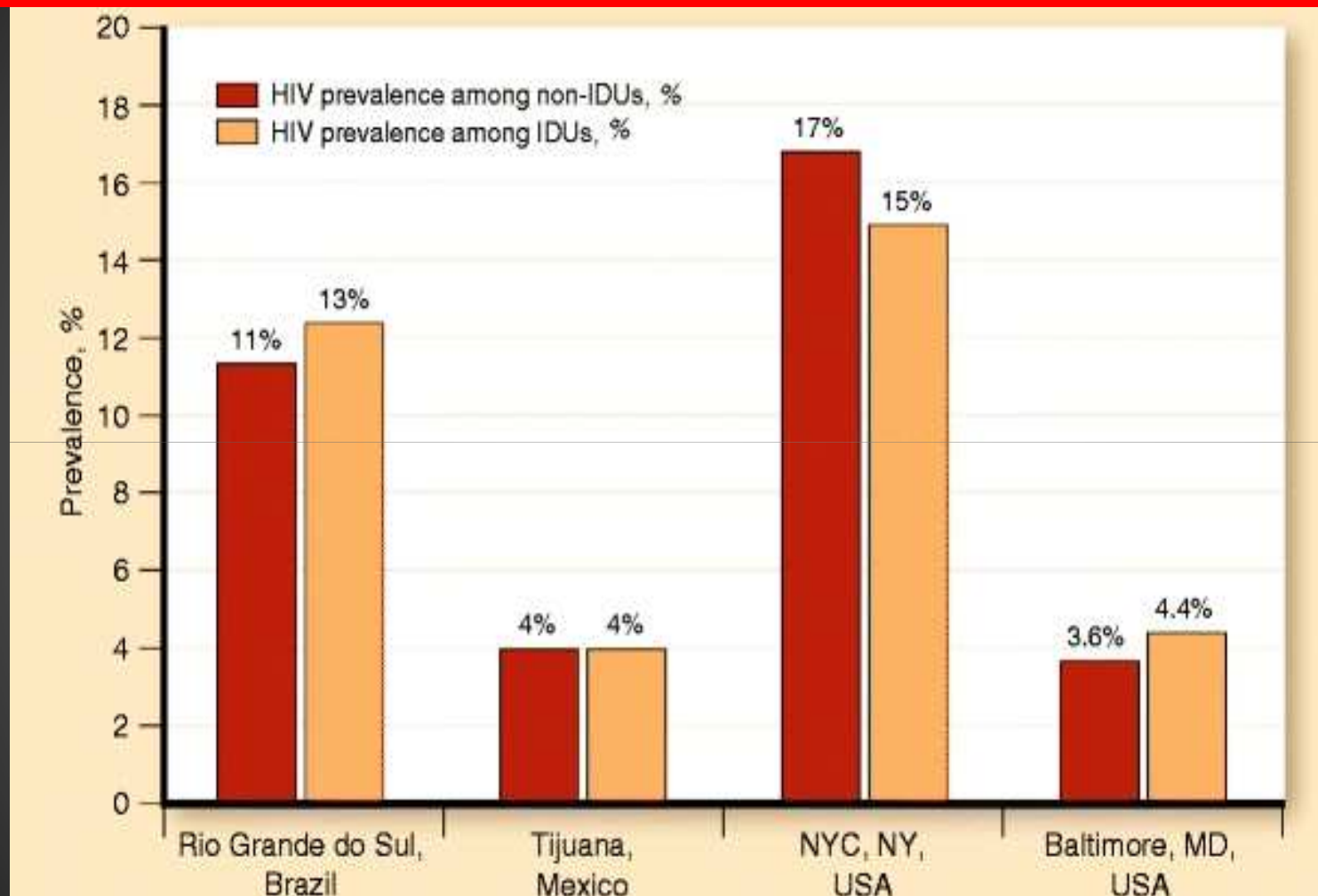
Estimated Number and Proportion of AIDS Cases among Adult and Adolescent Injection Drug Users 1985–2006—United States and Dependent Areas



Note. Data have been adjusted for reporting delays, and cases without risk factor information have been proportionally redistributed.



Convergence of HIV Seroprevalence Among IDU and Non-IDU among Selected Cities



Non-injecting drug use appears to be an important factor contributing to HIV infection due to their high-risk behaviors and overlapping social and sexual networks with IDUs

Offering HIV Testing in Outpatient Health Care Settings

- CDC now recommends offering routine HIV testing to persons regardless of risk factors:
 - Emergency Departments
 - Sexually Transmitted Diseases (STD) Clinics
 - Labor and Delivery
 - Correctional Facilities
 - Offices of Primary Care Physicians
 - Drug Abuse Treatment Clinics

Enhanced HIV Testing, Treatment, and Support for HIV-Infected Substance Users

In summary, available evidence strongly supports the need to rethink the approach to the management of HIV-infected substance users. An aggressive campaign to seek, test, treat, and retain HIV-positive substance users in optimal substance-use treatment and HAART regimens could have a significant effect in decreasing substance use and AIDS-related morbidity and mortality as well as HIV incidence. Immediate policy development is needed to support this strategy and overcome individual and health system barriers to effective integration of substance-use prevention and treatment with HIV programs. Ultimately, the HIV/AIDS epidemic cannot be adequately dealt with locally or internationally without addressing the needs of HIV-infected substance users.

Nora D. Volkow, MD

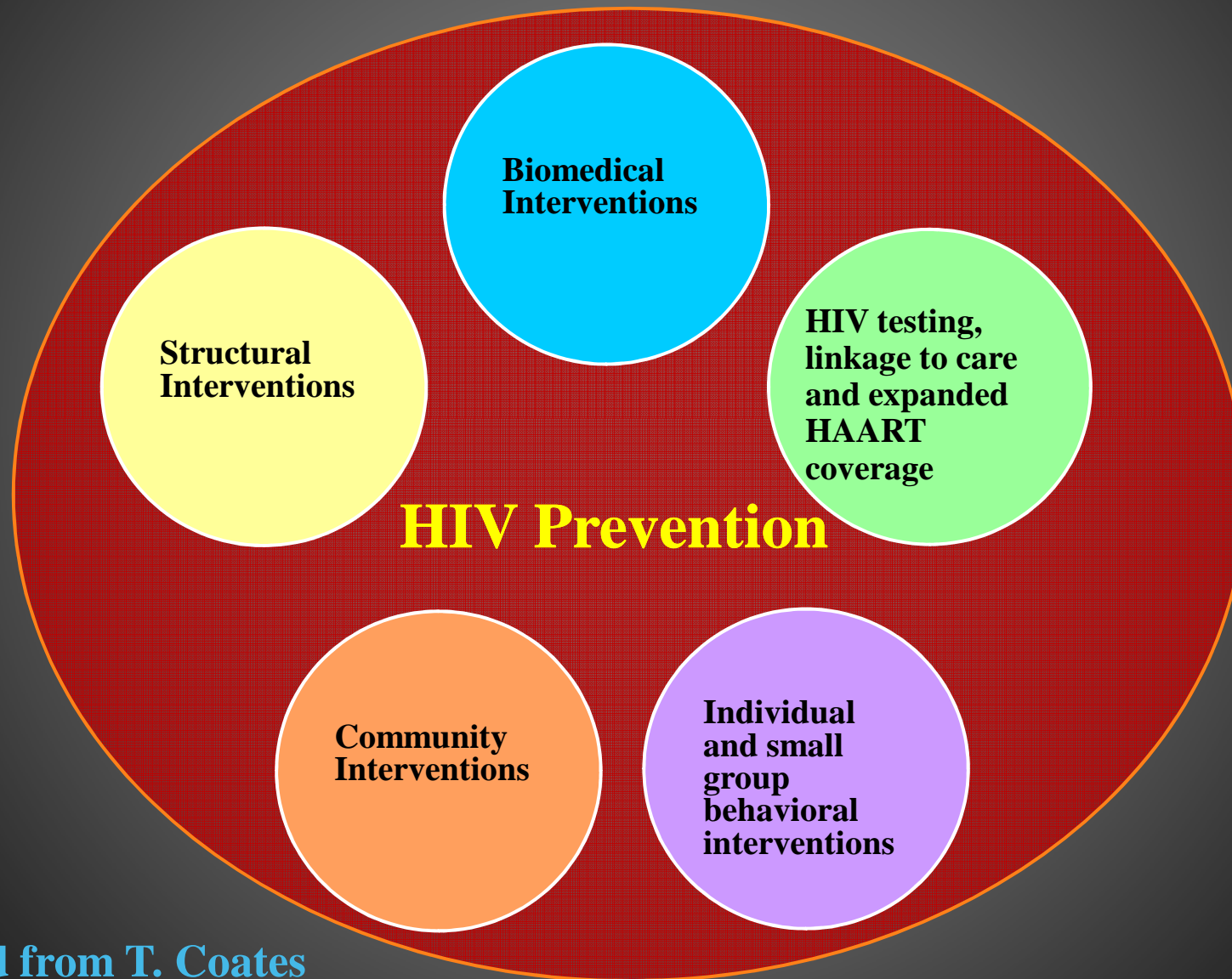
Julio Montaner, MD

NIDA CTN 0032 HIV Rapid Testing & Counseling in 12
US Drug Abuse Treatment Programs: *Completed*

NIDA Project Aware: HIV Rapid Testing & Counseling in 9
STD Clinics the US– An adaptation of CTN0032: *In progress*

Lisa Metsch, Raul Mandler, Dan Feaster, Lauren Gooden,
Susan Tross, Louise Haynes, Antoine Douaihy, Moupali Das,
Tiffany Kyle, Todd Korthuis, Robert Schwartz, Sarah
Erickson, Ned Snead, James Sorensen, and Grant Colfax

Combination Prevention



Modified from T. Coates

Substance Use Disorder (SUD)!!!



Alcohol Problems among HIV-Infected Persons

- Veterans with HIV (Veterans Aging Cohort Study) (n=881)*
 - 36% were current “hazardous” drinkers
- Patients establishing primary care for HIV infection (Boston Medical Center) (n=664)[†]
 - 42% had current or past alcohol problems

*Conigliaro J, Gordon AJ, McGinnis KA, Rabeneck L, Justice AC. JAIDS. 2003;33:521-525.

†Samet JH, Phillips SJ, Horton NJ, Traphagen ET, Freedberg KA. AIDS Res Hum Retroviruses. 2004; 20:151-155.

Alcohol Use & HIV Disease Progression

- Alcohol results in reduced VL response and CD4+ cell reconstitution & poorer adherence to ART
- Frequent alcohol intake (2 or more daily) and the combination of frequent alcohol & crack cocaine accelerate disease progression
- The effects on CD4+ count is independent of ART, alcohol and substance use may lead to unmeasured behaviors promoting disease progression
- The effects on VL seem to be through reduced adherence

Baum et al, 2010; Shuper et al., 2010

Physicians & Drug Users

- Little training on alcohol and other drug use and disorders
 - Ideology often supersedes evidence based practice
- Physicians report feeling little confidence in related skills
- Physicians report reduced professional satisfaction in caring for substance using patients

Miller 2001, Saitz 2002

Should ART be started in the patient who continues to use & abuse alcohol or other substances?



Current IDU and ART

- HIV-infected persons first prescribed ART between 1996-2000 (n=578)
 - classified as current IDU, former IDU, or non drug user
- Current IDUs were less likely to suppress their HIV-1 RNA to <500 copies/mL compared to non-drug users.
- Former IDUs were not less likely to achieve HIV-1 suppression compared to non-drug users.

Additional Barriers for IDUs

- Addiction as a competing priority
- Fear of drug interactions: What do clinicians know or tell users?
- Mistrust between medical profession and users inability to discuss
 - Drug use
 - Priorities
 - Drug interaction

Uldall 2004

Treatment Options

- If in recovery, ART should be considered in the same manner as with a patient without this history.
- It is reasonable to defer ART in active drug or alcohol users depending on CD4 count.
- Promoting optimal adherence and substance abuse treatment will influence positive outcomes.

Sherer R, 1998

Drug use and HIV

- Epidemiological studies suggests that drug use does not promote progression
- Drug use is associated with decreased likelihood of adherence which impacts outcomes
- Many drug users are able to adhere and achieve full benefit of treatment

SUD & HIV

- Not All IDU, not all Illegal
- Alcohol, Prescriptions medications
- Does SUD add to or interact with neuroAIDS?
- Methamphetamine (MA) and club drugs

Context

- Severe Mental Illness (SMI) refers to a range of major psychiatric disorders: schizophrenia, major depression and bipolar disorder, that persist over time and cause extensive functional disability
- People living with HIV have an increased risk of developing psychiatric and SUDs
- Integrated HIV prevention and interventions strategies needed

Prevalence of Dual Diagnosis (DD)

- Ranges from 10-80% depending on sampling and methodologies.
- In general about 50% of drug abusers have a comorbid mental illness.
- About a third of alcohol abusers have a comorbid mental illness
- More recent evidence from the United States suggests that approximately half of the 5–7% of adults with SMI have a co-occurring SUD
- The fact that any substance use at all compromises the effectiveness of mental health treatment is also clear

Moggi, et al., 1999; Drake et al, 1998; Mueser, et al, 1997

DD Patients

- Dual diagnosis patients are at risk for many psychosocial consequences:
 - Severe psychiatric symptomatology
 - Homelessness
 - Suicide
 - Violence (or being victims of)
 - Increased familial/societal burden
 - STD's and HIV infection
 - HCV

Mueser, et al, 1997; RachBeisel, et al, 1999

Treatment Compliance Challenge

- DD patients have low adherence patterns which leads to:
 - Frequent hospitalizations
 - Medication noncompliance
 - Missed therapy appointments.
 - Higher service utilization.

Bogenschutz, et al, 1998; el-Guebaly, et 1999

Principles of Dual Recovery

- DD patients typically get lost in either the mental health or substance abuse service providers.
- Traditional methods are typically ineffective.
- *Parallel and sequential* treatment are associated with *poor outcomes*
- *Effective* services require an *integrated* treatment approach.

Common Ingredients of Integrated Treatment

- Coordinated MH/SUD services
- Case management
- Assertive outreach
- Groups
- Education
- Motivational Interventions
- Behavioral strategies
- Family and social networking

DD Recovery Counseling

- DDRC uses a broad range of interventions:
 - Motivational Interviewing
 - Psychoeducation
 - Psychiatric services
 - Family interventions
 - CBT and problem solving
 - Medication adherence strategies

The DD/HIV Link

- A multidimensional problem.
- Evidence suggests a strong association.
- Factors contributing to HIV risk:
 - Frequent and severe psychiatric symptoms.
 - Consequent negative outcomes.
 - Poor treatment adherence (increased hospitalization)
 - Associated high risk behaviors.
 - Disorders associated with poor judgment, risk taking, impulsive behavior.
 - Reducing the perception of personal risk and decreasing the ability to negotiate safer sex practices.

DD & HIV

- 10-40% of HIV + patients studied have substance use and psychopathology.
- In patients with HIV and substance use, psychopathology was found in 26% to 79%
- More than 77% of patients with substance use and HIV have a psychiatric diagnosis.
- Between 3 and 48% of dual diagnosis patients have HIV infection
- 87% of pregnant women who are HIV + have a dual diagnosis

Douaihy et al. , 2003

Review of Research

- General psychiatric severity and ASPD are associated with HIV risk factors (poor judgment, impulsivity, higher levels of drug use)
- There is a significant relationship between psychiatric symptoms, high risk behaviors, and opiate addiction (needle sharing)
- Dual disorder of addiction and ASPD associated with increased high risk behaviors

DD & Adherence to ART

- Adherence to treatment and to antiretroviral therapy are interconnected
- Adherence to both psychosocial treatment and antiretroviral therapy increases the likelihood of therapeutic effectiveness and treatment success

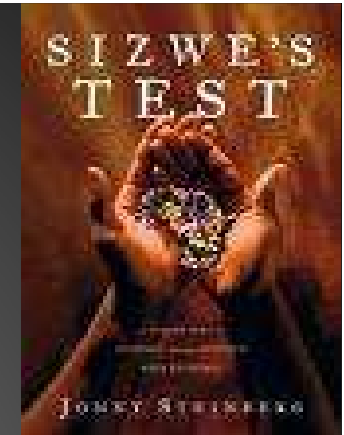
HIV Risk Reduction Strategies for DD

- Rationale
- Using IMB model: condom use self-efficacy & observed condom use proficiency skills
- STIRR
- Virtually all are group interventions/research-led interventions not provider-led interventions
- PATH study
- Multicomponent community level HIV risk-reduction intervention
- CTN0032: Rapid HIV Testing and Counseling in Drug Abuse Treatment Programs in the US (12 sites including AMS/CPCDS)--NIDA

Parry et al, 2007

Sikkema et al, 2007; Salomon et al, 2007

Triple Diagnosis (TD): Treatment Principles

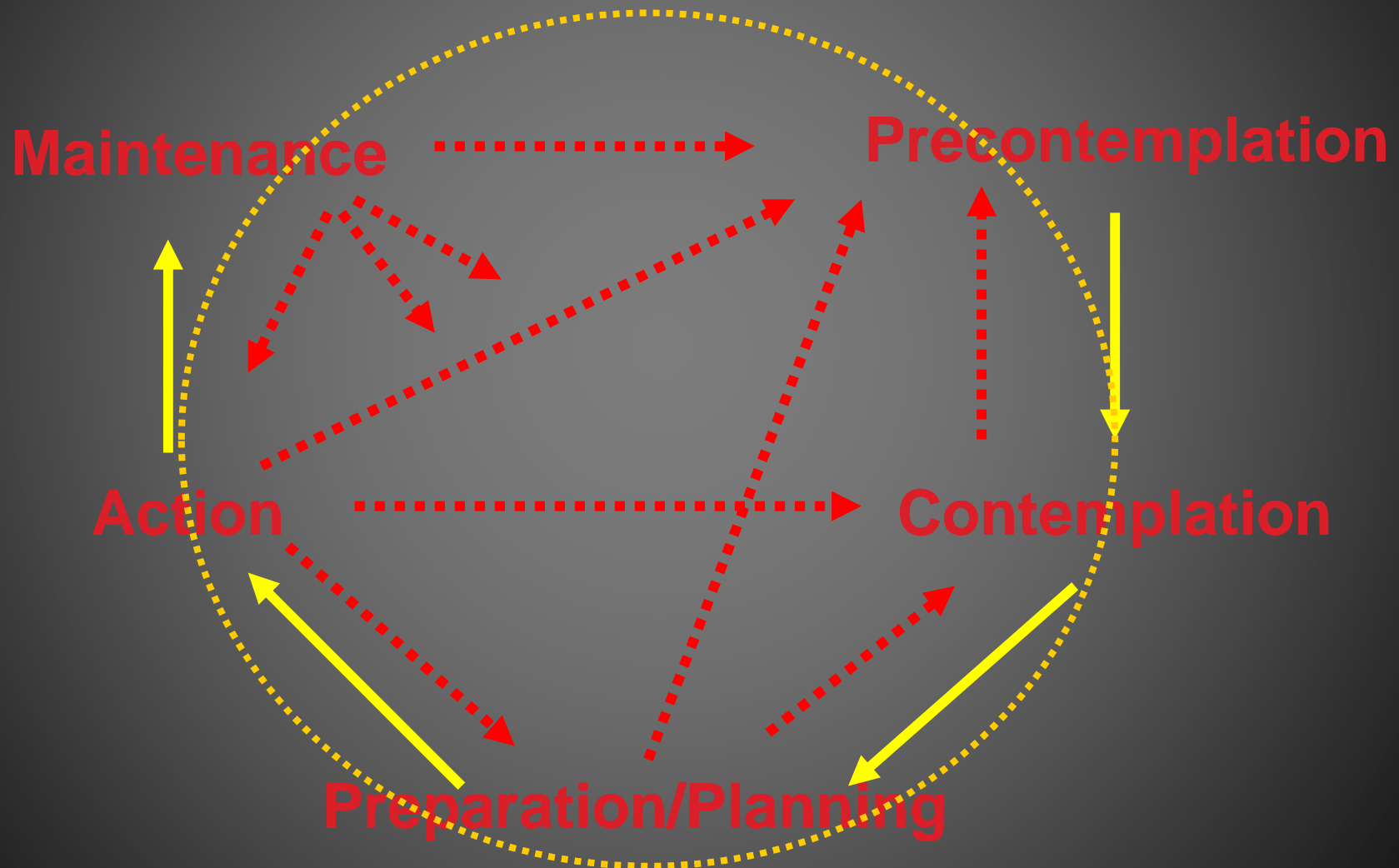


- Women, racial, ethnic minorities and socially and economically marginalized people are disproportionately affected by the *co-occurrence of HIV infection, SMI and SUD: “Triple Diagnosis”*
- Patient-centered approach based on empathy and unconditional positive regard.
- Ambivalence is common and multifaceted.
- Triply Diagnosed patients manifest hopelessness, depression, suicidal tendencies, all of which affect motivation.

Douaihy et al., 2003

Transtheoretical Change Process

HOW PEOPLE CHANGE



TD: Barriers to Treatment

- Factors that contribute to delayed entry, or lead to dropping out of care include:
 - Unstable housing
 - Lack of food
 - Lack of transportation
 - Complexities of the system
 - HMO required payment authorizations
 - Referral practices

TD

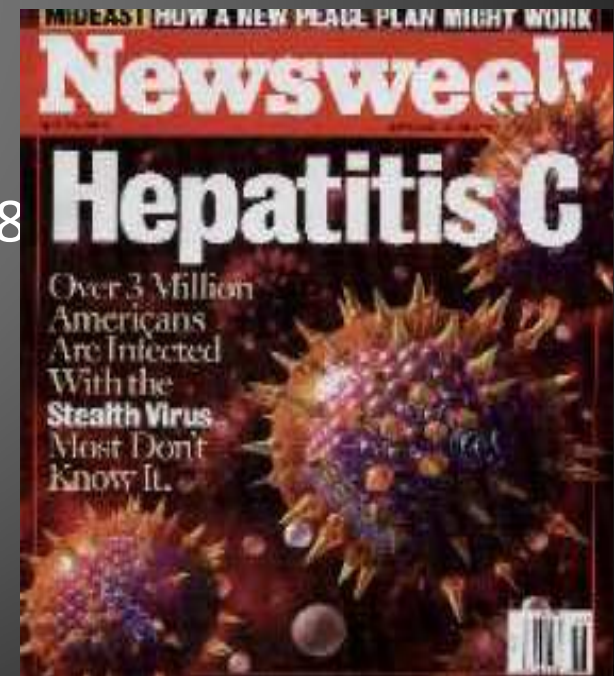
- IDUs are less likely to receive ART than any other population
- Factors associated with poor access to treatment include:
 - Active drug use
 - Younger age
 - Female gender
 - Sub-optimal health care
 - Not being in a drug treatment program
 - Recent incarceration
 - Lack of health care provider expertise

(DHHS, 2006)

TD: Causes of Cognitive Impairment

- Even in early stages of HIV infection, brain function associated with tasks (memory, attention, concentration, planning) may be affected
- Symptoms of cognitive impairment may be due to:
 - Depression
 - Substance-induced cognitive deficits
 - SUD & NeuroAIDS?
 - HIV/HCV Coinfection

Douaihy, Hilsabeck et al., 2008



Integrated Approach

- Integrated and interdisciplinary treatment approaches as a primary component of comprehensive HIV care
- Effectiveness of an integrated behavioral treatment specifically designed for triply diagnosed: DDR + cART Adherence +relationships with medical providers +sexual risk behavior
- Year-long intervention/interviewed at 3-monthly intervals → + outcomes

cART Utilization & Adherence Interventions

- Rationale
- Paucity of research on the association between triple diagnosis and cART utilization, adherence, & virological suppression
- Most promising integrated behavioral interventions
- Ongoing study: promoting adherence to cART and psychotropics

Chander et al, 2006; Uldall, et al, 2004; Kutney et al, 2006

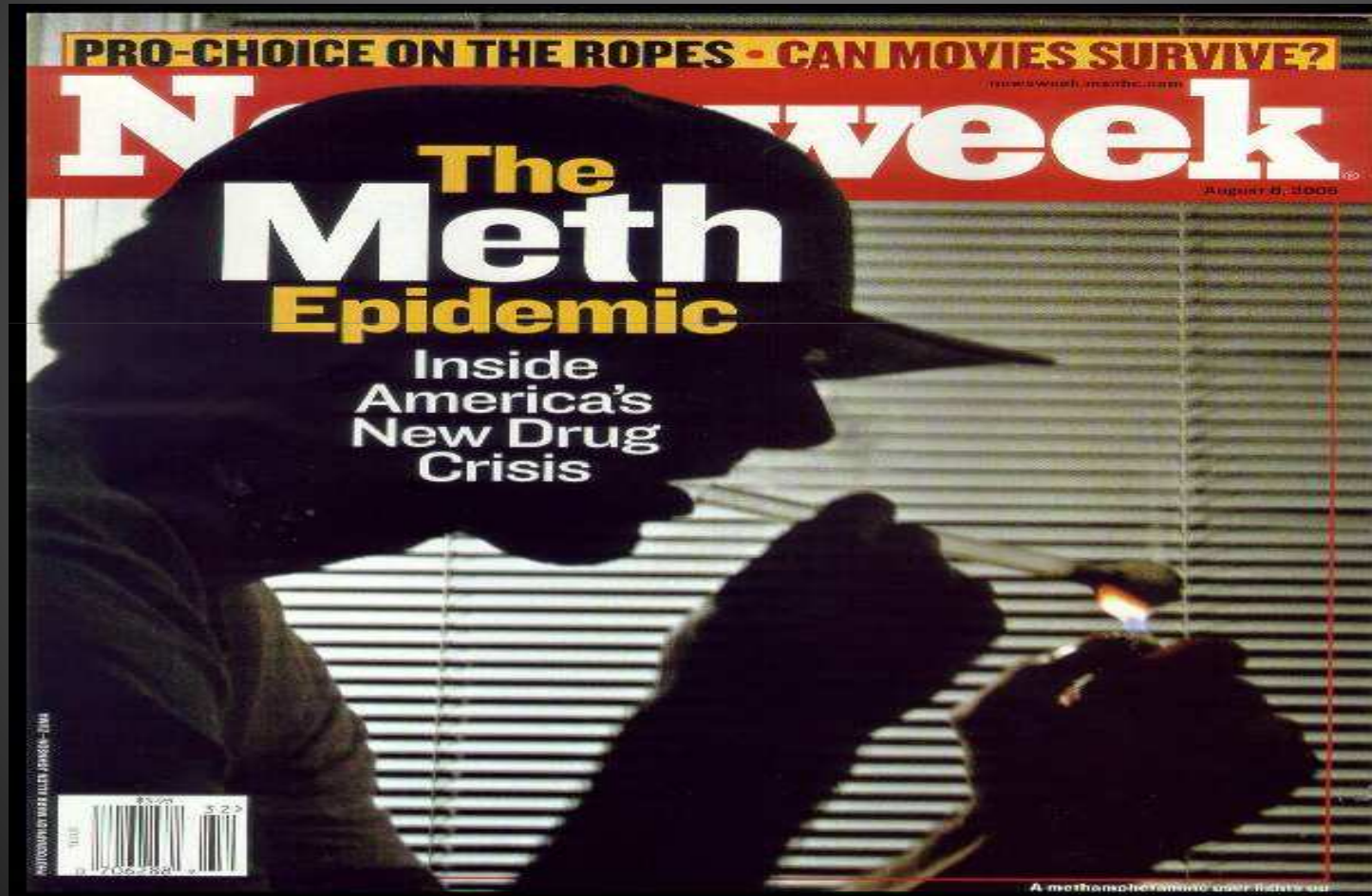
Integrated Care Needed for Patients With HIV, Drug Abuse, and Mental Illness

- NIDA Blending Conference in Cincinnati, 2008
- Metsch L, Metzger D, & Douaihy A
- Comprehensive services with complex needs
- Integrated care is really not just treatment itself, “The prevention piece is essential.”

Bridget M. Kuehn *JAMA*. 2008;300(5):494-495

Treatment as Integration & Prevention

- Case of Methamphetamine (MA)



Unique Subgroups of MA Users

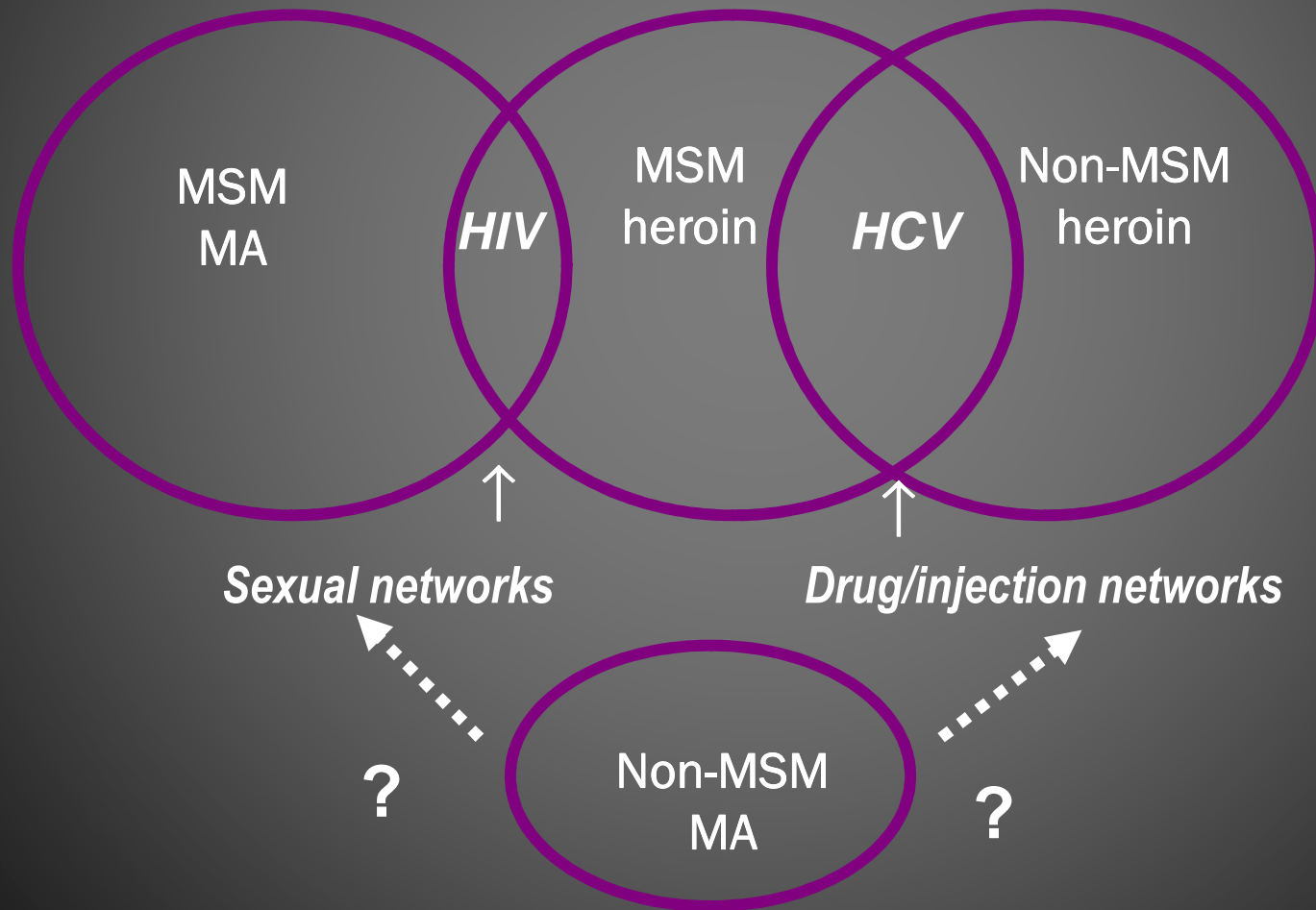
- MA users who take it daily or in very high doses
- Females
- Homeless, chronically mentally ill and/or individuals with high levels of psychiatric symptoms at admission.
- Individuals under the age of 21.
- Gay/bisexual men and other MSM (at very high risk for HIV transmission).
- Rural

MA Use in Rural Areas

Characteristics:

- Rural MA users mostly white
- Working class
- Similar involvement of both men and women
- Denial: “We don’t have HIV here”
- Structural factors
 - HIV stigma
 - Marginalization
 - Inadequate treatment services
 - Limited testing and prevention

Prevalence reflects risk networks



www.aidsmeds.com

www.crystalneon.org

HUGE SALE!

BUY CRYSTAL, get HIV FREE!

BONUS SPECIAL

Buy this trendy accessory pipe, get a life-time addiction absolutely **FREE**

"It's frightening. I've seen a huge increase of newly infected gay men that got HIV from unprotected sex during crystal meth binges. Our community is self-destructing with this drug."
- Howard Grossman, MD
HIV Specialist, St. Luke's-Roosevelt Hospital

Chelsea Phone Booth Ads Paid for by **AIDSMEDS.COM**
Conceived and Designed by Peter Slattery and Vincent Gagliostro

This Ad space donated by Gay City News



MSM Use Other Drugs, Too

- Mixing/matching common
- Poppers frequently mixed with crystal
(www.crystalneon.org)
- Ecstasy used to facilitate feelings of connectedness; methamphetamine used to transact sex (Schilder et al., 2006)



Chronic Effects of MA Use

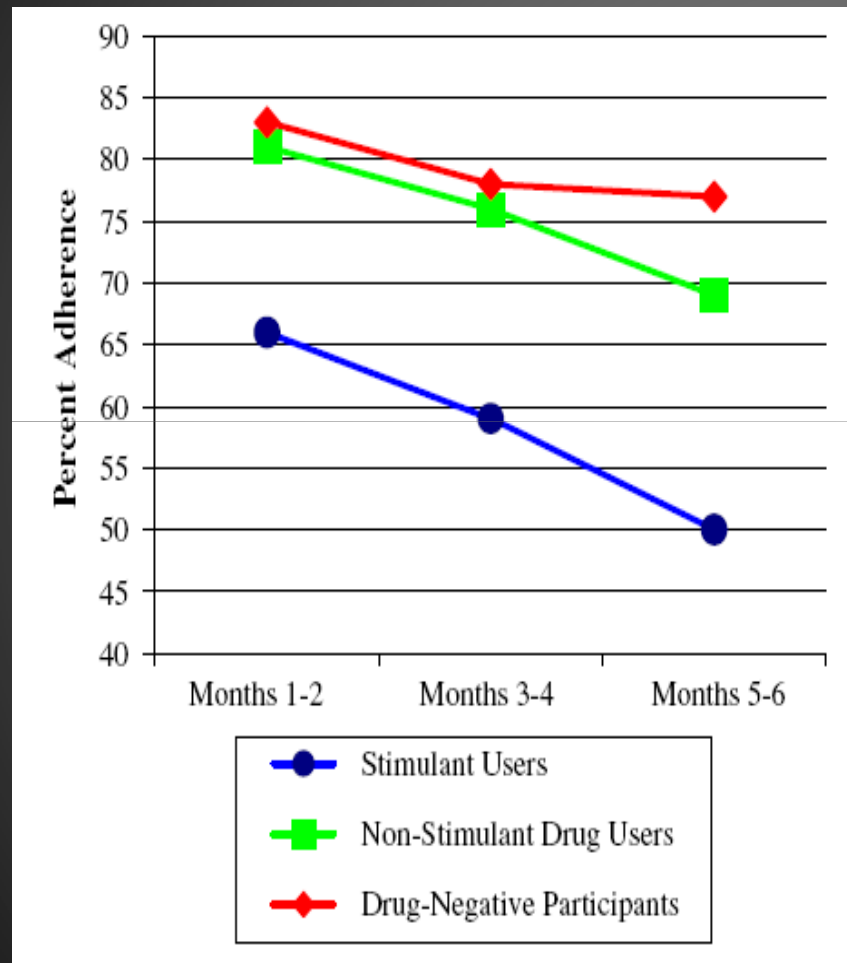
- Psychosis, depression, violence, family and social disruptions, criminal activity^[1] Among MSM, abuse increases likelihood of infection with HIV,^[2] may exacerbate neurotoxicity and other pathological processes common to HIV infection Markowitz et al., 2005
 - May worsen the HIV epidemic and complicate treatment of HIV^[4]

1. Peck JA, et al. J Addict Dis. 2005;24:115-132.

2. Shoptaw S, et al. Drug Alcohol Depend. 2005;78:125-134.

4. Urbina A, Jones K. Clin Infect Dis. 2004;38:890-894.

MA & HAART Adherence



- Use of drugs, especially stimulant drugs, reduces HAART adherence
- 3-day reported adherence rates:
 - On stimulants: 51%
 - Off stimulants: 72%
- Main effects of MA observed on behavioral organization

Hinkin et al., 2007, *AIDS & Behav* 11:185–194;

Arnsten et al., 2002, *J Gen Intern Med* 17:377-381

Take Home Points



PREVENT



0 to 1

1 to several

several to many



Opiate Dependence & HIV

- (Stop prescription opiates)
- Counseling, 12-step groups
- Detox
 - Supportive meds (e.g. clonidine)
 - Methadone or buprenorphine taper
- Opiate Maintenance Therapy
 - Methadone or buprenorphine at Addiction Treatment Center
 - Office Based buprenorphine
 - *Integrated* bup/nx treatment and HIV care is acceptable to providers and feasible in a variety of practice settings

(Weiss et al. 2011)

Buprenorphine Integration Initiative

- HRSA SPNS Initiative, 2004-2009
 - Pilot demonstrations of buprenorphine treatment integration in HIV clinics in 10 cities
 - HIV clinic providers and staff trained in buprenorphine treatment

Office-Based Buprenorphine (Very) Preliminary National Results

- 402 HIV-infected patients enrolled @ 10 HIV clinics, followed for up to 3 years.
- Those receiving buprenorphine had:
 - Decreased opiate use
 - Improved:
 - Quality of HIV Care
 - Retention in HIV care
 - HIV risk behaviors
 - Quality of Life
 - Receipt of antiretrovirals

Not to Forget: Tobacco & HIV

- Burden of Tobacco use: 85% of HIV-infected in the US have a lifetime history of smoking
- Current smoking highly prevalent
- Of concern giving the prevalence of insulin resistance, dyslipidemia, HTN, abdominal obesity and CVD among HIV+ persons in the era of ART
- High risk of tobacco-related disease and death
- Complex context of social, economic, psychiatric and medical needs
- Few efforts have been made to address smoking cessation
- Results from studies show efficacy
- Feasibility of smoking cessation within HIV clinics is supported by studies

Vidrine, 2009; Nahvi et al., 2009