



# Substance Abuse Treatment is HIV Prevention

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**Funding is highly categorical,  
creating bureaucracies that are  
narrowly focused.**



**Professional training is also highly specialized.**



**Yet, substance abuse impacts multiple areas of users' lives.**



**Treating or reducing substance abuse also improves multiple areas of users' lives.**



**Substance abuse treatment  
reduces not only drug use,  
but also reduces HIV risk.**



**The Type of Drug &  
Risk Population interact  
in predictable ways to increase  
Risk for HIV.**



# Sexual Risk Based on Type Drug

**Heroin** - decreases sex

**Cocaine** - increases sex

**Methamphetamine**

- increases sex for 6 mo.  
due to prolonged arousal
- after 6 mo., impotence  
increases risk



# MSM, young women, & CSW more likely to become HIV+ over 10 years

- MSM vs heterosexual 8.8 X
- Female sex worker  
vs non-worker 5.1 X
- Women > 40 years vs  
young women 2.8 X

Kral et al.,

2001

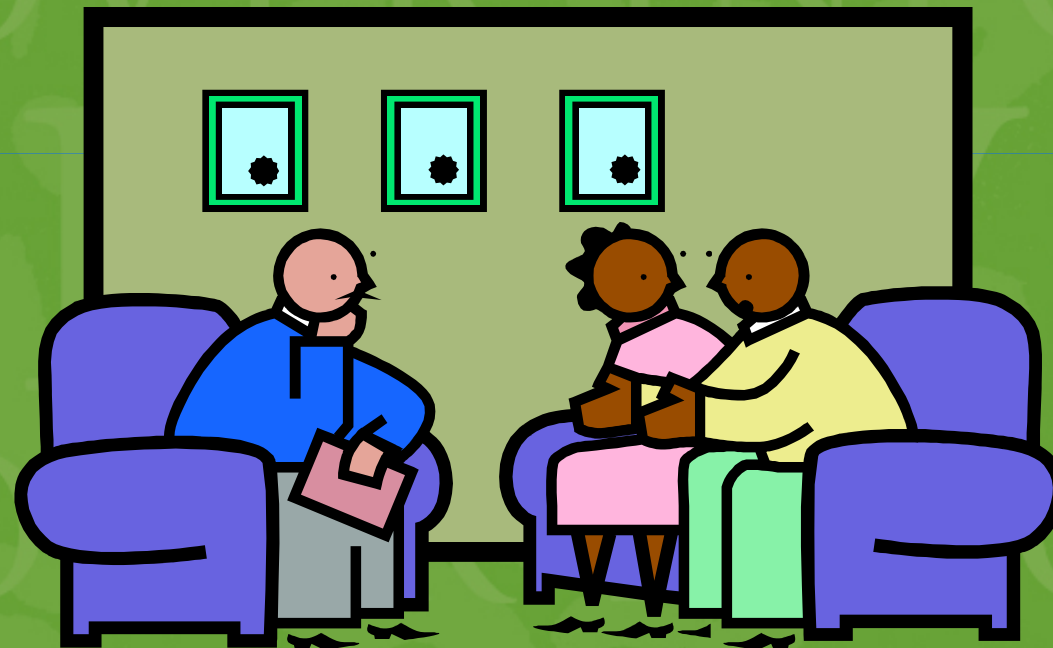
# **Methamphetamine Increases HIV Incidence among MSM**

**1.55 per 100 person years in CA  
19% prevalence**

**6.3% among IDU vs 2.1% non-IDU**

**3 times greater for meth & popper  
users**

**Yet, intervention approaches  
are relatively similar  
across type of drug & population.**



# Services vary substantially in their intensity & HIV impact

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**HIV or HCV testing**

**Needle exchange**

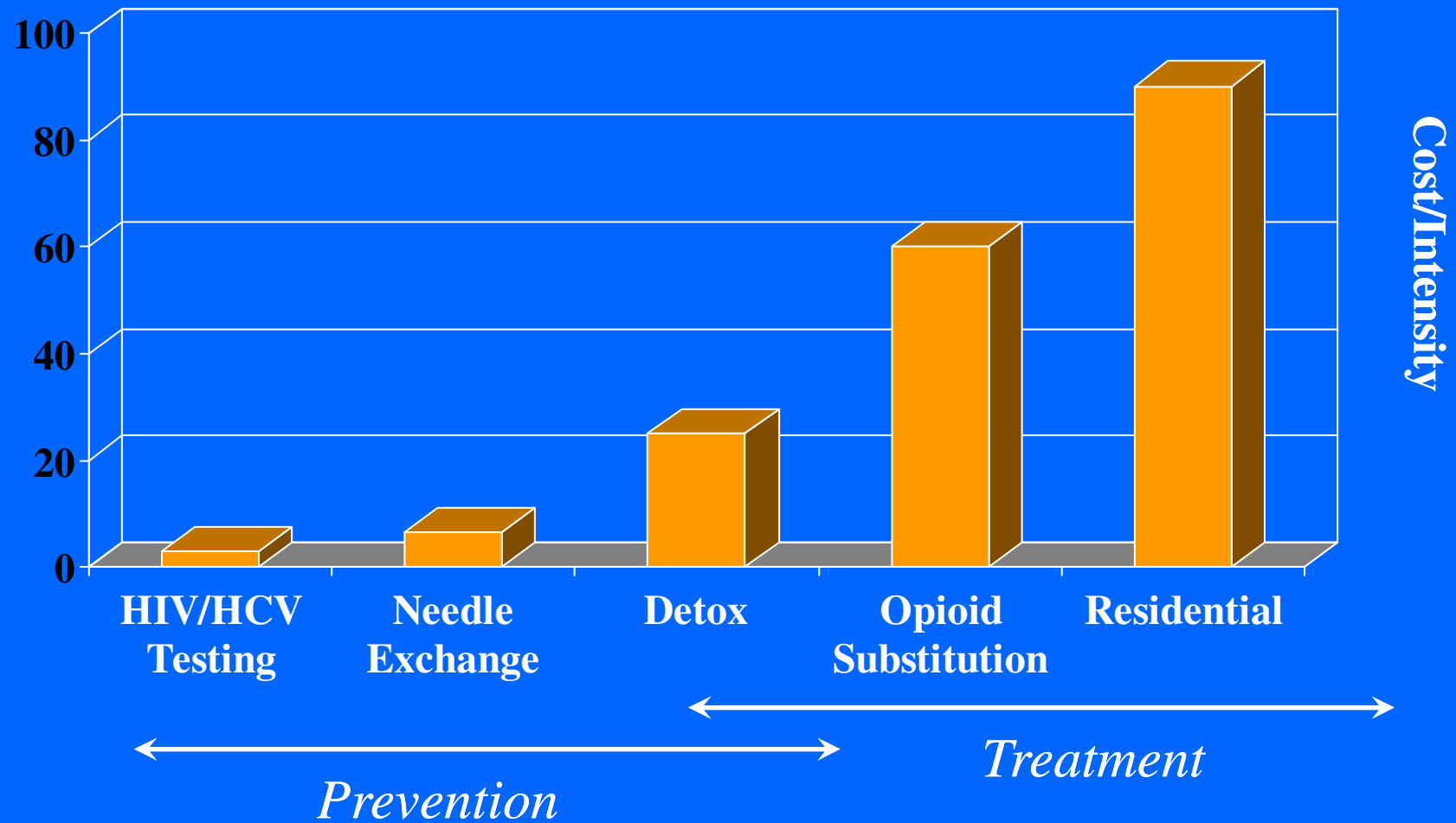
**Detoxification**

**Methadone**

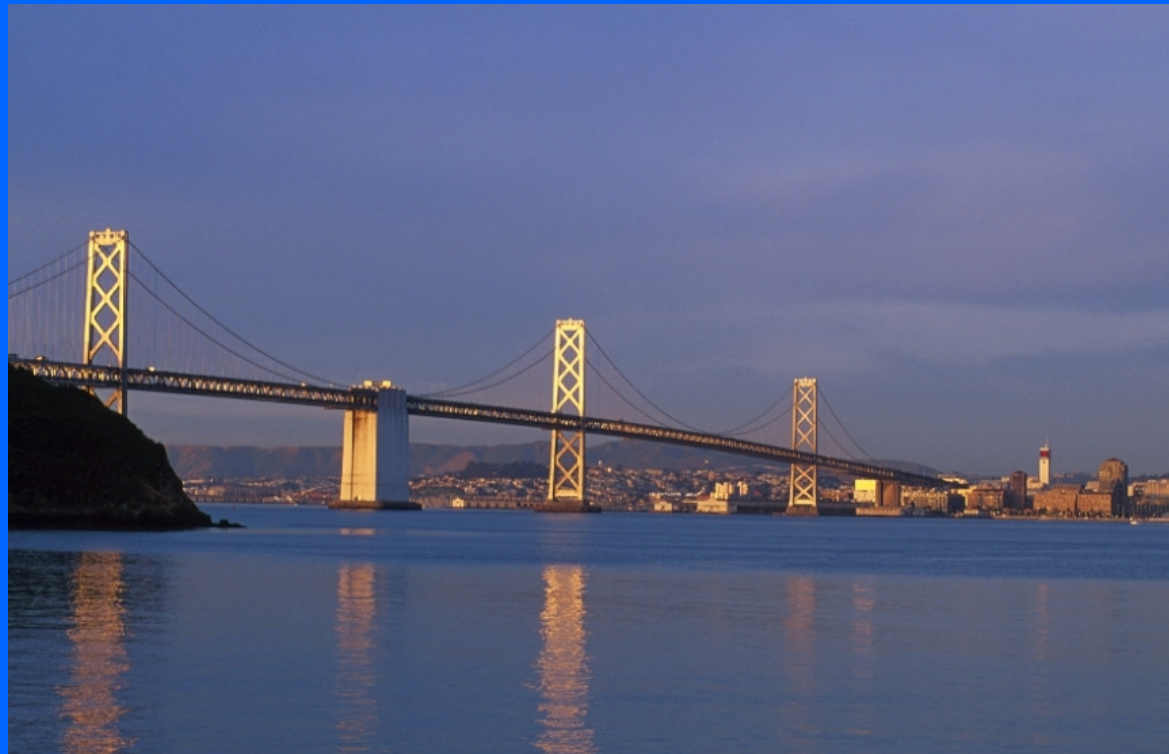
**Maintenance**

**Residential TX**

# Costs rise along the Prevention-Treatment Continuum



# Access shapes Utilization, not consumers' preferences

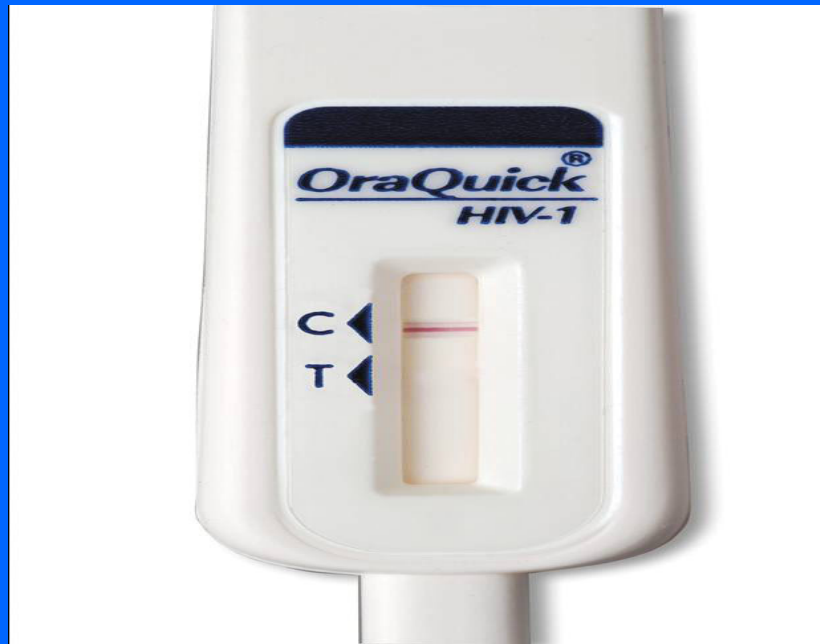


Creqaz et al., 2004

# HIV testing, Needle Exchange, & Contingency Management are Effective in Reducing HIV Risk



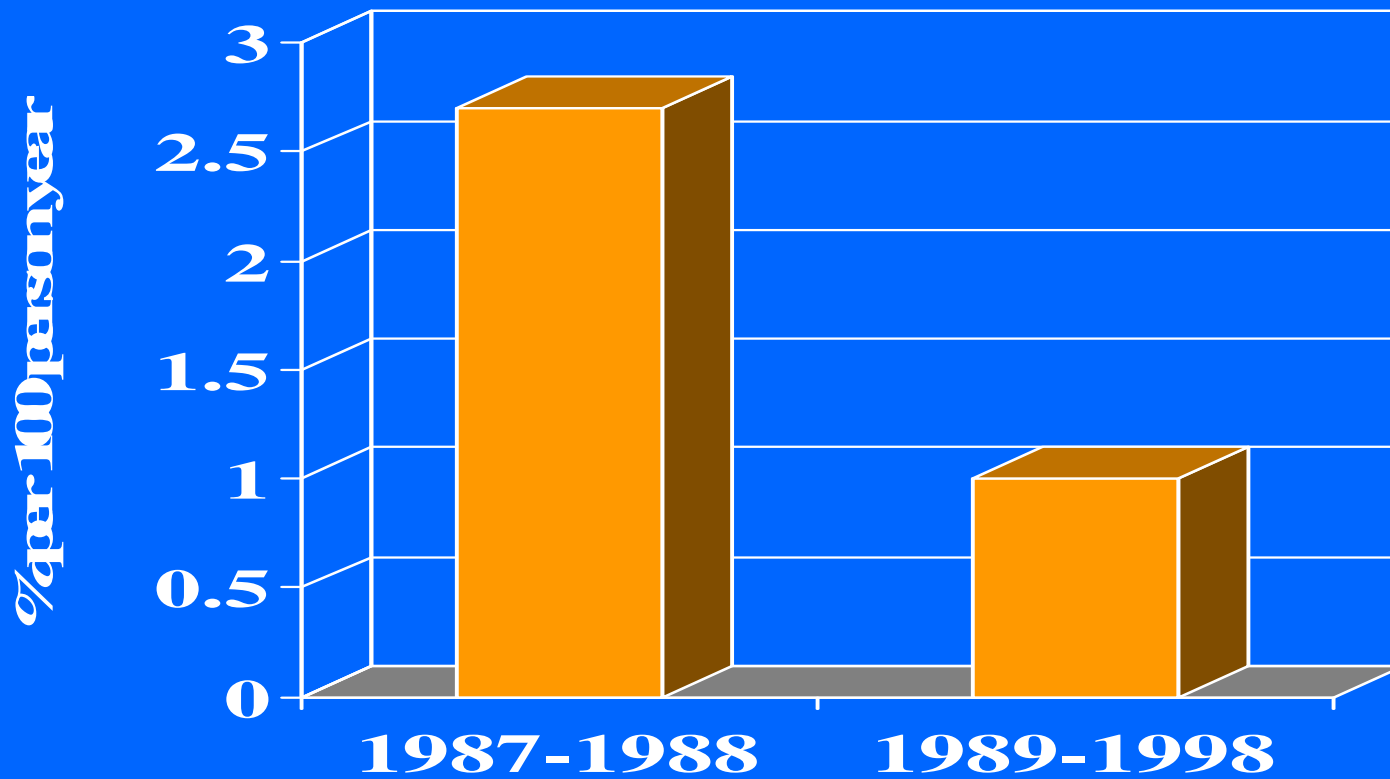
# Knowing HIV+ Status Reduces Sexual Transmission 50%-66%



Creqaz et al., 2004



# Repeated HIV Testing works for reducing risk among IDU



Kral et al., 2003

# Needle Exchange has been repeatedly demonstrated Efficacious

Reduces HIV  
transmission

Keeps skin clean

Part of more  
comprehensive  
Community  
morality problem



# Contingency Management



- ✓ Longer retention
- ✓ More clean urine
- ✓ Longer periods with consecutive clean urine samples

# Opioid Detoxification Alone is a Prescription for Failure

- Inpatient detoxification acceptable  
(Day et al., 2005)
- Outpatient detoxification  
ineffective (Amato et al., 2004)
- Psychosocial programs ineffective  
(Mayer et al., 2005)
- Opioid maintenance lifetime tx

# Opioid abuse is effectively Managed with drugs, resulting in Reductions in HIV Risk



# Methadone Replacement Tx

- Relatively inexpensive, ~\$4500
  - 10% - 20% of addicts get methadone in U.S.
  - Tx programs platforms for comprehensive health: education, HIV testing, Hepatitis C, TB
- (Krambeer et al., 2001)



# Opioid Agonist Replacement



**Decreases injection**

**Results in less unprotected sex**

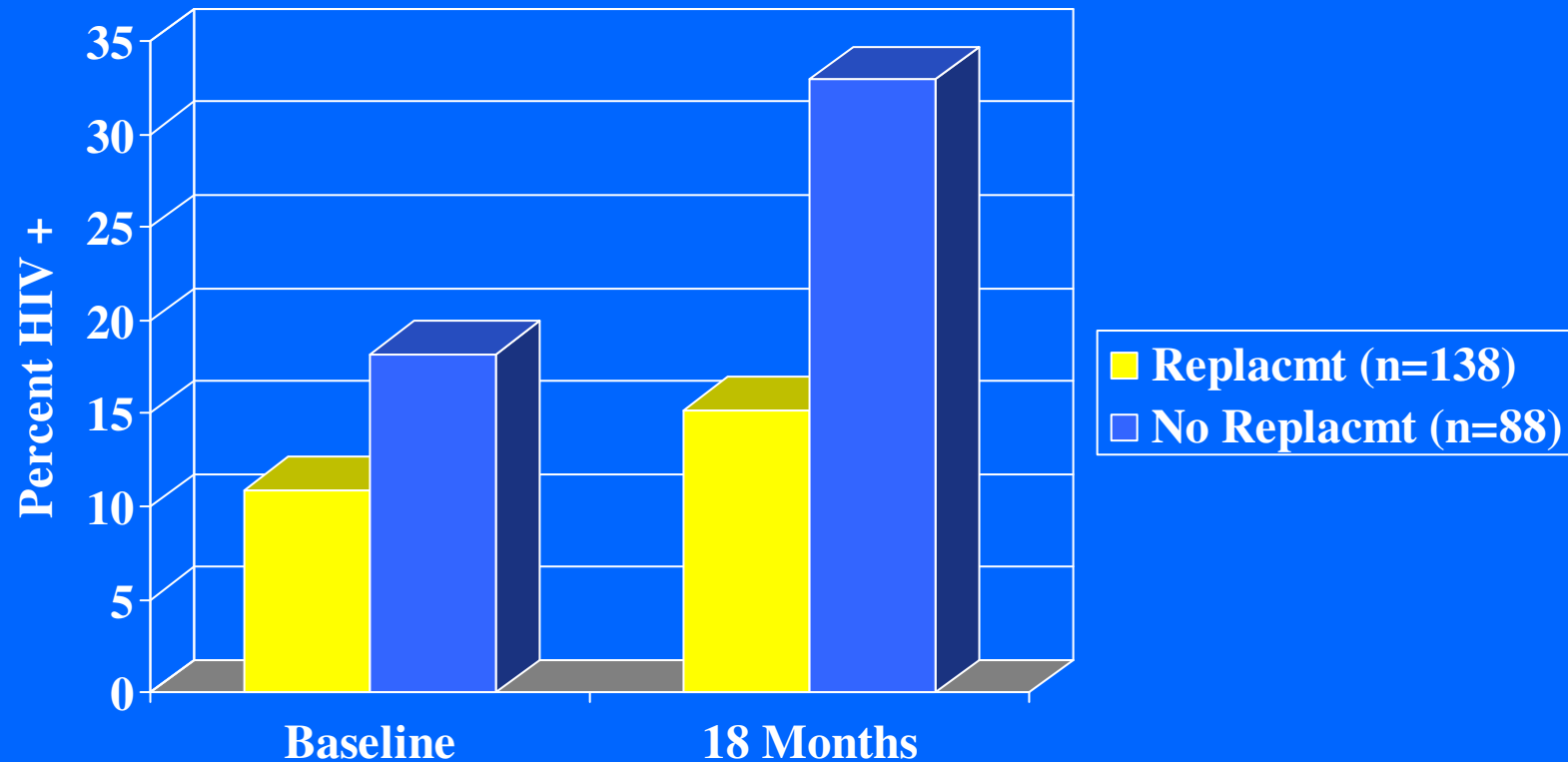
**(Sorensen & Copeland, 2000)**

# Opioid Replacement & Sexual Behaviors

- Reduces need for drug & associated sex work
- Reduces libido, decreasing number of sex partners
- Improves cognitive functioning & judgment about sexual risk situations



# HIV Seroconversion among IDU



**MM Replacement = 3/100 person years**

**No Replacement = 10/100 person years**

**Metzger et al.**

**1993**

# **HIV incidence < among IDU with MMT & multiple HIV tests**

**< 12 months MMT → 7.6%**

**➤ 12 months MMT → 2.1%**

**Recruited from MMT → 1.4% /  
person year**

**Recruited in detoxification →  
3.1% / person year**

**Moss et al., 1994**

# **Continuous Methadone Maintenance decreases HIV Incidence**

**Continuous MM                      0.7 / 100**

**Interrupted MM                      4.3 / 100**

**Williams et al., 1992**

# Drug Interactions: Methadone & HIV

- Liver enzymes impacted by Protease Inhibitors (HIV) & Rifampin (TB)
- Methadone decreases ddl 61%  
(dose ↑ or ddl EC)
- Methadone efficacy ↓ with HIV & TB medications; monitor for withdrawal & consider dose increase

# Best Outcome: Prevent Seroconversion

Current trial to  
examine HIV  
incidence  
ongoing among  
Chinese IDU



# Buprenorphine is an emerging drug treatment

## Suboxone

4:1 ratio  
buprenorphine to  
naloxone



**Subutex** – buprenorphine only

Expensive, but clinicians can  
deliver

Slow uptake now available



# **4 global challenges**

**Stay Healthy**

**Stop Transmission**

**Healthy Mind**

**Family, parenting,  
friends**

# HIV+ INTERVENTIONS

HIV+	HIV+ (+)	Age	Delivery Modality	Recruitment
TLC	-	12 – 23	Small group	1993 – 1995
CLEAR	+ drugs	14 – 29	Individual	1999 – 2001
SUUBI	-	11 – 23	Small group	2003 – 2004
Healthy Living	+ sex	> 18	Individual	2000 – 2002

Publications: TLC (2001); CLEAR (2004); CLEAR Uganda (in submission); Healthy Living (2006)



# OUTCOMES

	SEX	SUBSTANCE ABUSE	FOLLOW-UP, MONTHS
<b>TLC</b>	<p>↓ 45% sex partners</p> <p>↓ 50% HIV- sex partners</p> <p>↓ 82% unprotected sex</p>	<p>↓ 31% weighted use index</p>	6
<b>CLEAR</b>	<p>↓ 59% HIV- sex partners</p>	<p>↓ 21% alcohol, mar., hard drugs</p>	15
<b>SUUBI</b>	<p>↓ in # sexual partners</p> <p>↑ condom use</p>	N/A	3
<b>Healthy Living</b>	<p>↓ 53% sex acts</p>	<p>↓ alcohol, mar., hard drugs, days of use</p>	25

# Prevention for HIV+

Individual & small group  
Adolescents & Adults



Reduces frequency of use  
No elimination of a drug  
Harm reduction model  
Reductions in sex risk  
Both effective formats

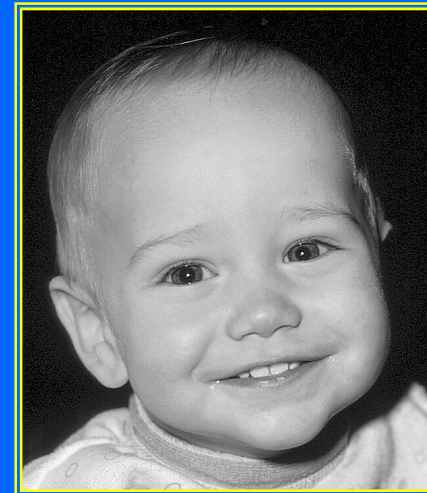
# Families get intergenerational benefits



- < Depression
  - < Drug relapse
  - < HIV risk
  - < Family conflict
- Healthier teens  
Healthier grand-  
babies

# Intervention Grandchildren: 18 & 36 mo.

- Better adjusted
- Tend better home environments
- Tend > IQs



# **Multiple Drug Treatment Strategies Reduce Risk for HIV**

**HIV testing**

**Needle Exchange**

**Contingency Management**

**Opioid Replacement**

**Behavioral Prevention Programs**

**Our primary challenge is to provide  
access to Drug Tx &  
providers & funders delivering  
comprehensive programs**



**Science provides  
strategies that are not  
implemented.**

**Challenge is  
IMPLEMENTATION.**

**Move across professional boundaries, value others, & implement a realistic agenda**

