# Determinants of Not Sharing Needles, Trends in Behavior, and the Effectiveness of PSI's Peer Education Program among IDUs in Yunnan Province, China

Guanbai Zhang, Zhiyong Zhang, Kim Longfield, PhD, Jennifer Christian, MPH

Presentation to the American Public Health Association Annual Meeting

November 5, 2007







# Study Objectives

- To understand IDUs' knowledge, attitudes and risk behaviors with regard to HIV/AIDS
- Identify opportunity, ability, and motivational (OAM) determinants of needle/syringe (N/S) sharing
- Monitor changes in behavior and OAM over time
- Evaluate program effectiveness in changing behavior and OAM

### Methodology

- Baseline survey in August, 2004 (N=668)
- 2<sup>nd</sup> round in February, 2006 (N=547)
- Three study sites: Kunming, Kaiyuan and Yingjiang
- Interviews conducted in government detoxification centers
- Random sampling of those 16 years or older who had been in detox for 3 months or less

# Methodology (cont.)

- Only respondents who had injected drugs in the month prior to detention were included
- Multivariate analysis was used to identify determinants of behavior
- UNIANOVAs were used to compare findings across study years and exposure levels

### **Program Model and Content**

#### Communication Channels

- Peer Education within Detoxification Centers
- Community Drop-in Center in Kunming

#### Content

- HIV prevention knowledge
- Preventing injecting-related health risks

#### Tools

- Flipcharts
- Games and large group activities

#### Length of Intervention

-18 months

### **Population Characteristics**

INDICATORS	August 2004 (N = 668)	February 2006 (N = 547)	Sig.
DEMONGRAPHIC CHARACTERISTICS	%	%	
- Female	6.14%	14.4%	***
- 30 years or older	45.2%	64.0%	***
- Han	60.8%	83.2%	***
- 800 RMB or higher monthly income	47.0%	65.9%	***
- Middle school or higher	52.5%	70.0%	***

\*p<0.05, \*\*p<0.01, \*\*\* p<0.001

# Measuring Exposure Intensity

No Exposure = 0 point Low Exposure = 1-8 points High Exposure = 9 or more

Exposure	Point System
Received brochure	1
1 visit to drop-in center	1
Attending large public event	1
2-9 visits to drop-in center	4
1 Detox Peer Education Session	4
10 or more visits to drop-in center	8

#### **Monitoring: Indicator Changes over Time**

INDICATORS	August 2004 (N=668)	February 2006 (N=547)	Sig.
BEHAVIOR/USE	%	%	
Never shared N/S in month prior to entering detox center	63.4%	61.9%	n.s
Did not share cooker/vial/container, filter/cotton or rinse water when injecting in the month prior to entering detox	62.1%	52.3%	**
OPPORTUNITY			
Availability			
Able to obtain new, clean N/S when needed	92.7%	97.6%	***
ABILITY	%	%	
Knowledge			
Knows a person can become infected with HIV by injecting with a previously-used N/S, even once	80.7%	88.4%	**
MOTIVATION	%	%	
Attitude			
Believes it is important to know own HIV status	94.3%	90.0%	**
Threat			
Perceives self to be at risk for contracting HIV	35.7%	54.4%	***

\*p<0.05, \*\*p<0.01, \*\*\* p<0.001 © **2007 PSI** 

#### **Evaluation: Program Effectiveness**

	Exposure to activity			Effect		
INDICATORS	Ref. (n=668) 55.0%	None (n=89) 7.3%	Low (n=185) 15.2%	High (n=273) 22.5%	Sig.	
BEHAVIOR/USE	%	%	%	%		
Did not share cooker/vial/container, filter/cotton or rinse water 1 month prior to detox when injecting	62.1% <sup>a</sup>	57.3% <sup>a, b</sup>	57.2% a	47.5% b	**	-
OPPORTUNITY	%	%	%	%		
Availability						
Able to obtain new, clean N/S when needed	92.7% a	96.5% a, b	98.4% b	96.5% b	***	None
ABILITY	%	%	%	%		
Knowledge						
Knows a person can become infected with HIV by injecting with a previously-used N/S, even once	80.7% <sup>a</sup>	83.2%ª	85.1% ª	92.4% b	***	+

<sup>\*</sup>p<0.05, \*\*p<0.01, \*\*\* p<0.001

Proportions with the same letter in their superscripts do not differ significantly from one another according to the least significance difference (LSD) test. The stars in the last column represent the overall effect of exposure on the measured item.

#### Segmentation: Determinants of N/S Sharing

	N/S sharing		
INDICATORS	Never shared (n=342) 62.6%	Shared (n=204) 37.4%	Sig.
OPPORTUNITY	%	%	
Social Norm			
My friends think it's a problem to borrow used N/S from people they know	87.7%	62.1%	***
ABILITY			
Knowledge			
Burning is not enough to clean a needle	64.8%	50.7%	*
MOTIVATION			
Intention	Mean	Mean	
Intention to never share N/S (scaled construct)	2.37	2.12	***
	%	%	
Usually keeps own used N/S in case pharmacies are closed when need to inject	44.9%	24.5%	**
Threat			
I know someone who's infected with HIV	37.3%	49.9%	*
BEHAVIOR	%	%	
Did not share cooker/vial/container, cotton/filter or rinse water in month prior to entering detox	74.5%	18.3%	***

<sup>\*</sup>p<0.05, \*\*p<0.01, \*\*\* p<0.001

## Determinants of N/S Sharing

- Intention to never share N/S (scaled items)
  - Even if my drug hunger is very strong,
     I will not borrow someone's N/S
  - I am more likely to share N/S when the pharmacies are closed (R)
  - I am more likely to share N/S when money is tight (R)

### **Programmatic Recommendations**

- Improve IDU knowledge on effective needle cleaning techniques
- Emphasize ways in which IDUs can avoid sharing N/S, such as buying extras in advance or keeping an extra needle for emergencies. "Plan Ahead!" messaging
- Promote social norms around encouraging friends not to share
- Place more emphasis on avoiding sharing works, not just N/S



#### THANK YOU!

For more information please contact:
Zhang Zhiyong
PSI/China Research Manager

zhangzhiyong@psichina.org www.psi.org