



# NHBS Baltimore: The BESURE Study 2013 update

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# Overview

- NHBS/BESURE standard indicators project: using behavioral data for prevention planning
- IDU data collection
  - Sample characteristics (IDU1, IDU2, IDU3)
  - HIV status and unrecognized infection (IDU1, IDU2, IDU3)
  - Standard indicators (IDU3)
  - Local questions (IDU3)
- Upcoming HET3 cycle



# STANDARD INDICATORS



# Goals

- Match NHBS items with local and national HIV prevention and service goals
  - NHAS
  - ECHPP
- Make it easier to use NHBS data locally



# Methods

- Review NHAS, ECHPP, local HIV-related goals in collaboration with stakeholders
- Identify priority list of goals
- Review NHBS surveys of all waves for potential related measures
- Descriptive data showing % of each measure
  - Total, by HIV status, by newly diagnosed HIV, by race/ethnicity
- Clean code to repeat in future



# Results

- Survey items that match local and national priorities
  - HIV testing, availability of condoms and sterile syringes, behavioral risk reduction interventions, HIV care, and HIV/STI/hepatitis integration
- Socio-demographic and behavioral characteristics important to assess
- Survey items that are helpful but not directly matched
- Goals for which other sources are better suited
- Goals for which NHBS could do better



# NHBS/BESURE data to date

	Wave 1	Wave 2	Wave 3
<b><i>Men who have sex with men (MSM)</i></b>	<b>June 2004- April 2005</b>	<b>July - Oct 2008</b>	<b>Sept-Dec 2011</b>
Data collection method	Venue-based	Venue-based	Venue-based
Total MSM in past year*	645	448	403
HIV prevalence	37.7%	37.5%	42.4%
Prevalence newly diagnosed HIV infection	58.4%	78.4%	69.6%
<b><i>Injection drug users (IDU)</i></b>	<b>Aug 2006 – Jan 2007</b>	<b>Sept – Dec 2009</b>	<b>Aug-Dec 2012</b>
Data collection method	Respondent Driven Sampling	Respondent Driven Sampling	Respondent Driven Sampling
Total IDU in past year recruited*	539	507	TBD
HIV prevalence	11.9%	16.2%	TBD
Prevalence newly diagnosed HIV infection	50.0%	41.2%	TBD
<b><i>Heterosexuals at high risk (HET)</i></b>	<b>July – Oct 2007</b>	<b>Sept – Dec 2010</b>	<b>2013</b>
Data collection method	Venue-based	Respondent Driven Sampling	Respondent Driven Sampling
Total recruited *	332	383	TBD
HIV prevalence	3.9%	6.3%	TBD
Prevalence newly diagnosed infection	83.3%	62.5%	TBD

\*Complete survey and HIV test

# Goal → Survey item → Measure

LOCAL HIV PREVENTION AND CARE GOAL	NHBS SURVEY ITEM	MEASURE
<b>HIV TESTING</b>		
Increase the percentage of people living with HIV/AIDS (PLWH) who know their HIV status	What was the result of your most recent HIV test? [Positive, Negative, Never obtained results, Indeterminant] + NHBS HIV test result	Newly diagnosed HIV infection
Increase the percentage of HIV-positive clients who receive their test results	What was the result of your most recent HIV test? [Positive, Negative, Never obtained results, Indeterminant]	Obtained result of last HIV test
Increase HIV testing among the populations at greatest risk for HIV infection in the Baltimore-Towson MSA	In the past 2 years, how many times have you been tested for HIV? (excluding NHBS HIV test). When did you have your most recent HIV test?	HIV test in past two years; HIV test in past year
Increase the number of residents in the Baltimore-Towson MSA who receive routine HIV screening as part of ongoing medical care	Have you seen a doctor, nurse, or other health care provider in the past 12 months? At any of those times you were seen, were you offered an HIV test? An HIV test checks whether someone has the virus that causes AIDS.	Offered HIV test by healthcare provider in past year
Increase the number of HIV tests provided in emergency departments located in high prevalence communities	When you got tested the last time, where did you get tested?	Last HIV test location; Last HIV test in emergency room
Reduce barriers to HIV testing	I'm going to read you a list of reasons why some people have not been tested for HIV. Which of these best describes the most important reason you have not been tested for HIV in the past 12 months?	Barriers to HIV testing





# HIV testing goals, MSM waves

	MSM1 (n=645)			MSM2 (n=448)			MSM3 (n=403)		
	Total n (%)	Pos n (%)	New n (%)	Total n (%)	Pos n (%)	New n (%)	Total n (%)	Pos n (%)	New n (%)
HIV Test in past 2 years	428 (66.7)	146 (60.6)	72 (50.7)	312 (69.8)	107 (63.7)	85 (68.0)	289 (71.9)	107 (62.9)	71 (61.7)
HIV Test in past year	352 (54.4)	122 (50.6)	54 (38.0)	233 (52.5)	76 (45.2)	59 (47.2)	228 (57.1)	85 (50.0)	55 (47.8)
Obtained result of recent test	508 (90.9)	185 (86.9)	84 (75.0)	369 (91.6)	132 (87.4)	89 (82.4)	338 (93.4)	135 (91.2)	80 (85.1)
Offered HIV test by health care provider in past year *	228 (45.7)	104 (50.7)	64 (59.3)	200 (55.7)	83 (59.7)	57 (58.2)	183 (57.9)	77 (53.1)	47 (51.7)
Most common location last test**	Community health center/public health clinic (CHC/PHC) (29%)			CHC/PHC (29%)			CHC/PHC (33%)		
Most common reason for no HIV test in past year **	Afraid of finding out you have HIV (36%)			Afraid of finding out ... (36%)			Afraid of finding out ... (27%)		

☐



# HIV testing goals, IDU waves

	IDU1 (n=539)			IDU2 (n=507)			IDU3 (2012)		
	Total n (%)	Pos n (%)	New n (%)	Total n (%)	Pos n (%)	New n (%)	Total n (%)	Pos n (%)	New n (%)
HIV Test in past 2 years	387 (71.9)	38 (59.4)	20 (62.5)	406 (80.2)	47 (58.0)	18 (46.2)			
HIV Test in past year	250 (46.4)	24 (37.5)	8 (25.0)	315 (63.5)	36 (46.2)	11 (29.7)			
Obtained result of recent test	433 (90.2)	51 (85.0)	19 (67.9)	425 (88.4)	53 (74.7)	13 (46.4)			
Offered HIV test by health care provider in past year *	213 (59.8)	27 (56.3)	13 (68.4)	273 (69.5)	45 (65.2)	15 (51.7)			
Most common location last test**	CHC/PHC (17%)			CHC/PHC (19%) & Mobile unit (19%)					
Most common reason for no HIV test in past year **	Afraid of finding out ... (38%)			Afraid of finding out ... (28%) & Think you are at low risk (28%)					

?



# HIV testing goals, HET waves

	HET1 (n=332)			HET2 (n=383)			HET3 (2013)		
	Total n (%)	Pos n (%)	New n (%)	Total n (%)	Pos n (%)	New n (%)	Total n (%)	Pos n (%)	New n (%)
HIV Test in past 2 years	196 (63.2)	6 (54.5)	5 (50.0)	245 (65.0)	11 (47.8)	3 (37.5)			
HIV Test in past year	138 (44.8)	5 (45.5)	4 (40.0)	166 (44.2)	5 (21.7)	2 (25.0)			
Obtained result of recent test	227 (87.0)	4 (57.1)	4 (66.7)	313 (92.9)	16 (76.2)	8 (61.5)			
Offered HIV test by health care provider in past year *	141 (57.8)	7 (70.0)	7 (70.0)	168 (60.2)	8 (40.0)	5 (41.7)			
Most common location last test**	CHC/PHC (37%)			CHC/PHC (35%)					
Most common reason for no HIV test in past year **	Afraid of finding out ... (28%)			Afraid of finding out ... (28%)					

?



# **INJECTION DRUG USERS, BALTIMORE NHBS DATA**



# IDU overview

	Wave 1 Aug 2006 – Jan 2007	Wave 2 Sept – Dec 2009	Wave 3 Sept – Dec 2012
Data collection method	Respondent Driven	Respondent Driven	Respondent Driven
Total IDU in past year recruited *	539	507	620
HIV prevalence	11.9%	16.2%	23.2%
Prevalence unrecognized infection	50%	48%	28%

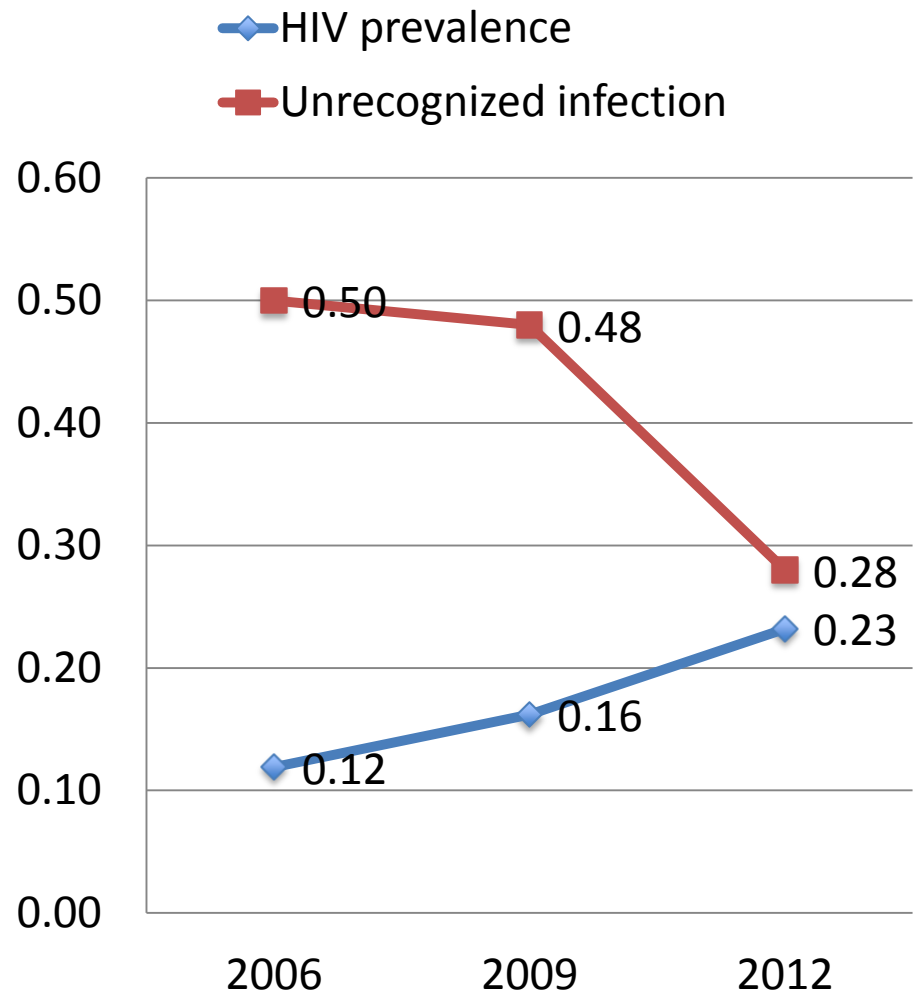
\*Complete survey and HIV test



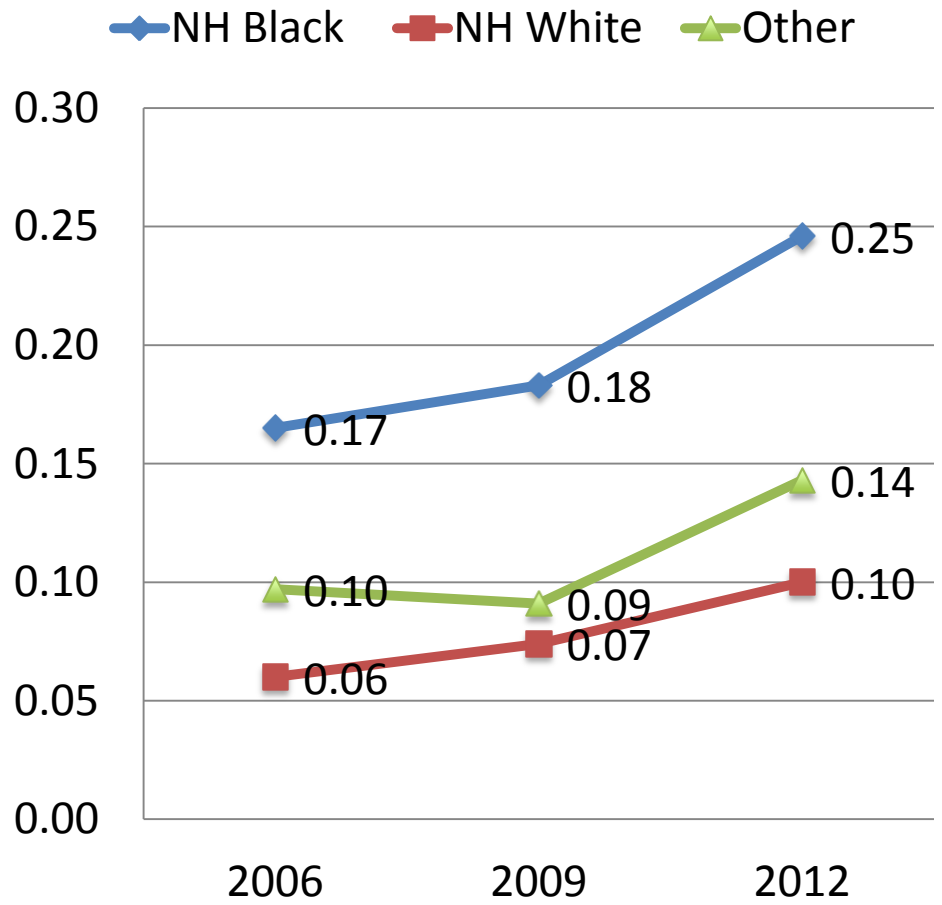
# Sample characteristics: IDU1, IDU2, IDU3

Characteristic		IDU1 (n=539)	IDU2 (n=507)	IDU3 (n=620)
Gender	Female	38%	27%	33%
Race/Ethnicity	Black, not Hispanic	54%	80%	89%
	White, not Hispanic	41%	16%	6%
	Other	6%	4%	5%
Age	18-34	27%	14%	3%
	35-44	42%	23%	15%
	45 or older	31%	64%	82%
Education	High school or more	52%	57%	57%
Homelessness	Past Year	58%	54%	32%
	Current	56%	59%	44%
Jail (*survey item changed in IDU3)	Ever			91%
	Past Year	47%	44%	23%
Years since first IDU	10 or more	61%	86%	91%
Daily IDU	Yes	79%	90%	80%
Crack use past year	Yes	46%	43%	36%

# HIV among Baltimore IDU, Behavioral Surveillance 2006-2012

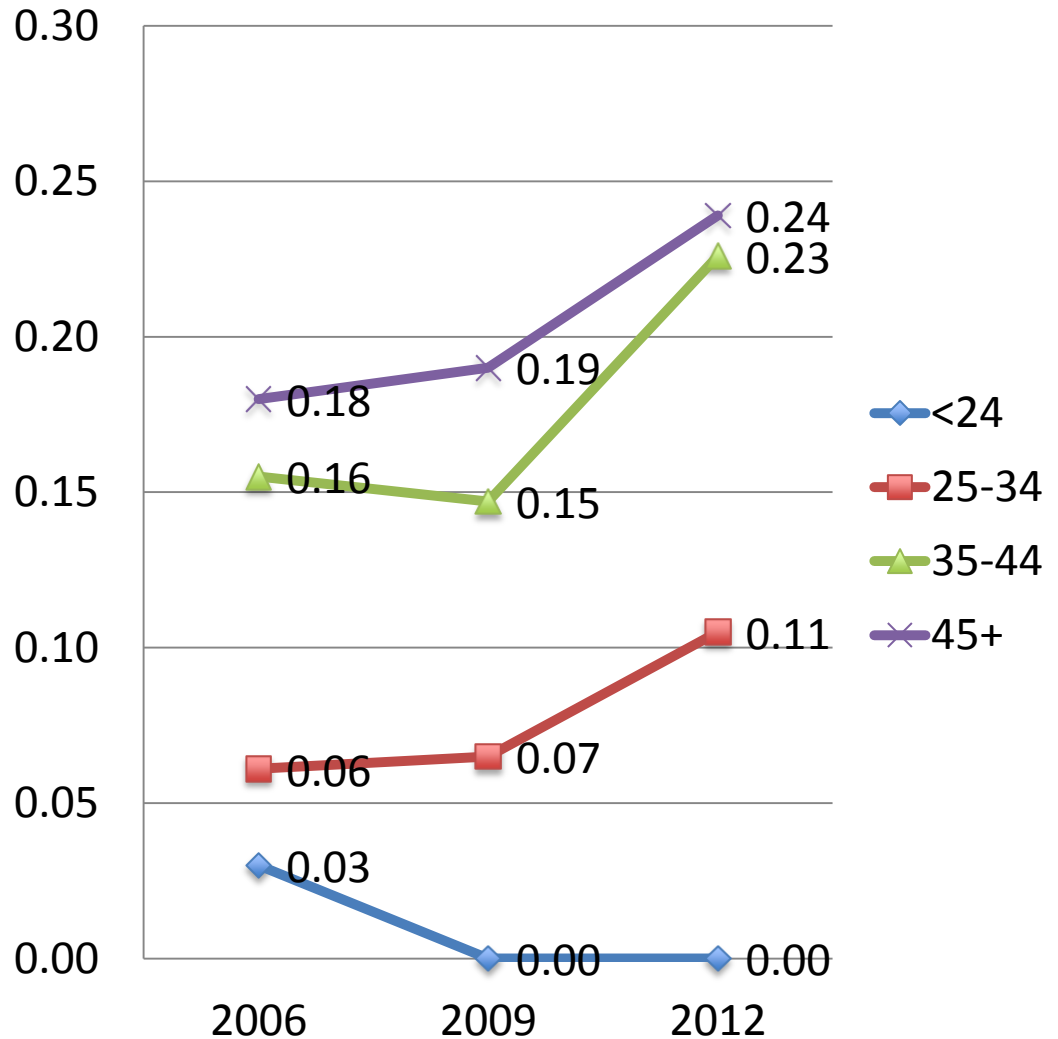


# Injection drug use prevalence by race/ethnicity among Baltimore IDU, 2006-2012

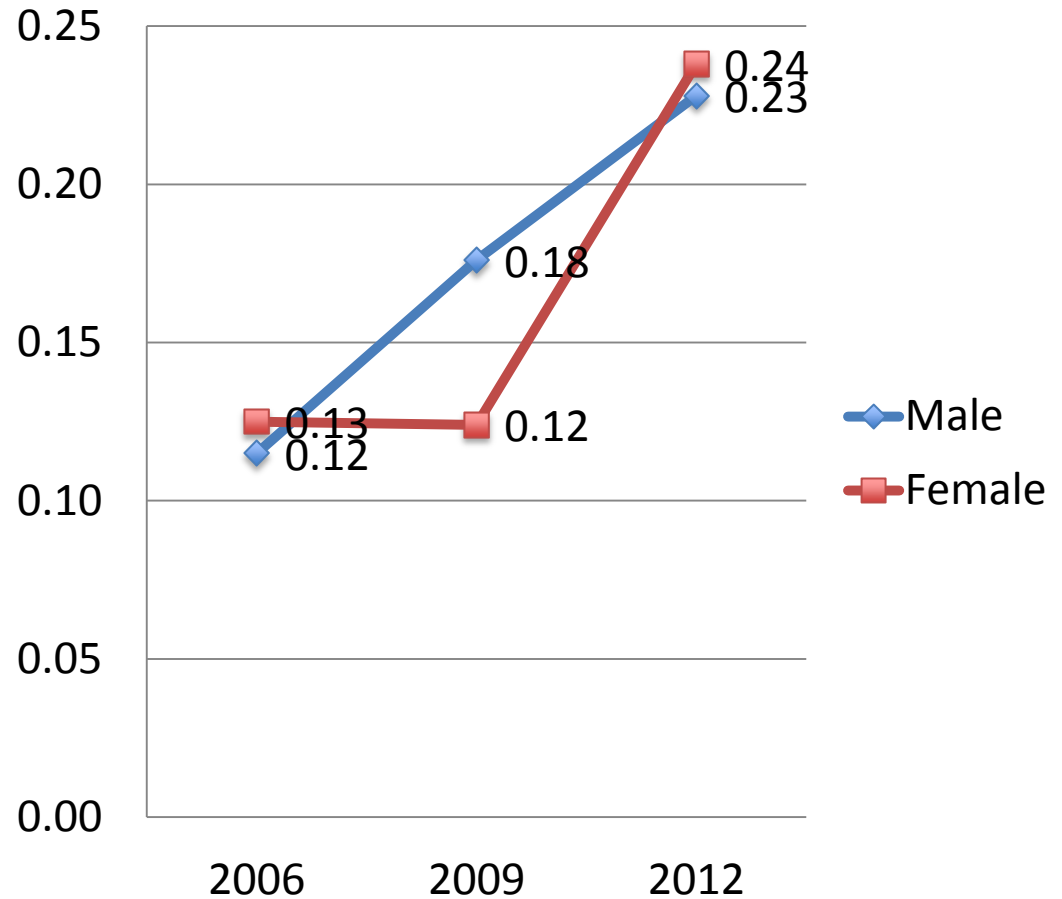




# HIV prevalence by age among Baltimore IDU: 2006-2012

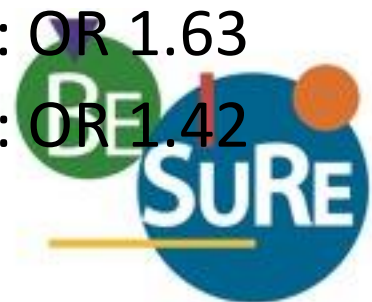


# HIV prevalence by gender among Baltimore IDU: 2006-2012



# HIV status across waves

- Multivariate regression of HIV infection, accounting for race/ethnicity, age, gender, years injecting, daily injecting and survey wave
- HIV significantly associated with:
  - NH Black compared to NH White: OR = 2.19
  - Injecting 10+ years compared to less: OR = 2.71
  - Daily injecting compared to less: OR = 0.72
- Controlling for demographics:
  - HIV in IDU3 significantly higher than in IDU1: OR 1.63
  - HIV in IDU3 significantly higher than in IDU2: OR 1.42



# Awareness of HIV positive status across waves

- Multivariate regression of HIV awareness, accounting for race/ethnicity, age, gender, years injecting, daily injecting and survey wave
- HIV awareness significantly associated with:
  - NH Black compared to NH White: OR = 3.1
- Controlling for demographics:
  - HIV awareness in IDU3 significantly higher than in IDU1: OR 2.39
  - HIV awareness in IDU3 significantly higher than in IDU2: OR 2.47



# STANDARD INDICATORS: IDU3



# Sex and drug-related behaviors (IDU3)

	% Total (n=620)	% HIV+ (n=144)	% New HIV+ (n=40)
Women who ever had sex with men	99.0	100.0	100.0
In past 12 months	87.5	89.4	91.7
Women who ever had sex with women	NA	NA	NA
In past 12 months	21.0	12.0	25.0
Men who ever had sex with women	98.1	94.7	89.3
In the past 12 months	86.8	71.6	71.4
Men who ever had sex with men	13.7	19.2	17.9
In the past 12 months	6.5	13.8	17.9
Injection drug use ever	100.0	100.0	100.0
In the past 12 months	100.0	100.0	100.0



# Sex and drug-related behaviors (IDU3)

	% Total (n=620)	% HIV+ (n=144)	% New HIV+ (n=40)
Unprotected Sex in past 12 months	68.7	50.0	60.0
Unprotected Anal Sex in past 12 months	20.7	14.8	25.0
Always Used New Sterile Needle past 12 months	35.1	31.0	22.5
Used Needle After Someone Else past 12 months	22.8	25.7	42.5
Used Injection Equipment (cooker, cotton, water) After Someone Else past 12 months	62.2	70.1	85.0



# HIV testing behavior (IDU3)

	% Total (n=620)	% HIV+ (n=144)	% New HIV+ (n=40)
Ever had HIV test	98.1	95.8	85.0
HIV Testing in Last Two Years *	81.2	67.8	48.7
HIV Testing in Last Twelve Months *	67.2	56.0	30.8
Obtained Result of Recent Test **	89.0	80.7	57.6
Offered HIV test by health care provider in the last 12 months ***	66.9	57.0	48.3
Location of last test	HIV/AIDS street outreach program (28%), Public health clinic/health center (26%)		
Most important reason didn't get tested in past year	No particular reason (43%), Afraid of finding out (28%)		

\*of total

\*\*among those ever tested

\*\*\*among those who saw health provider in past year





# HIV care and partner services (IDU3)

	% Total (n=620)	% known HIV+ (n=104)	% New HIV+ (n=40)
Doctor's visit in the last 12 months for HIV Care		TBD	-
Antiretroviral Use**		70.8	-
Asked to provide partner information for contacting after receiving first positive result **		61.4	-
Provided contact information of any partners when asked***		87.1	-

\*\*among those who reported prior HIV positive test result

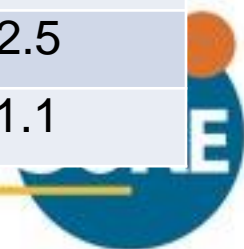
\*\*\*among persons asked to provide partner information



# STD & HCV Testing/Diagnosis (IDU3)

	% Total (n=620)	% HIV+ (n=144)	% New HIV+ (n=40)
Any STD Test in the last 12m	28.7	31.9	27.5
STD test type in last 12m	Syp: 83%, Gon:78%, Chl: 72%	Syp 79%, Gon: 75%, Chl: 63%	Syp 70%, Gon: 64%, Chl: 60%
Any STD diagnosis last 12m	4.4	9.1	10.3
Among those tested past 12m	15.3	28.3	36.3
Among those tested for each	S 7%, G 8%, C 7%	S 18%, G 12%, C 15%	S: 14%, G: 14%, C: 17%
Ever diagnosed with Hepatitis	56.0	62.7	30.0
Ever HCV Test	79.1	78.7	47.4
HCV Test in the last 12m *	42.1	46.2	22.2
Ever diagnosed with HCV	48.5	53.4	22.5
Diag. w/HCV in last 12m **	7.0	8.0	11.1

\* Among those ever tested for HCV \*\* Among those diagnosed with HCV



# HIV community-based interventions (IDU3)

	% Total (n=620)	% HIV+ (n=144)	% New HIV+ (n=40)
Received Free Condoms	62.5	68.8	65.0
Used Free Condoms*	65.5	73.7	69.2
Received Sterile Syringes	58.9	60.4	60.0
Used Free Syringes**	98.6	100.0	100.0
Received Free Kits	52.1	52.8	52.5
Used Free Kits***	98.8	100.0	100.0
Participated in one-on-one conversation with outreach worker/counselor about ways to prevent HIV (excluding during HIV test)	31.0	36.1	27.5
Participated in organized group session to discuss ways to prevent HIV (excluding discussions with friends)	14.1	20.8	10.0

\*Among those who received free condoms, \*\*Among those who received free syringes, \*\*\*Among those who received free kits



# Local questions (IDU3)

- Current living situation
  - Type: House/apt I rent, 41%; Rent room/space from someone else, 26%
  - How long: Over 5 yrs, 23%; 1-6 mo, 22%; 1-2 yrs, 21%
  - Concern about needing new place: Very or Extremely, 45%
- Financial situation
  - How often unsure of where money would come from: Most of the time or Always, 32%
  - Money sources: Odd jobs, 40%; Social security: 39%; ... FT/PT job: 15%



# Local questions (IDU3)

- Law enforcement
  - Times arrested past year: 0x, 68%; 1x, 21%; 3x, 8%
  - Arrested for paraphernalia past year: 8% of total, 25% of arrests
  - Concern about getting arrested for paraphernalia: Very or Extremely: 53%
- Pharmacy access
  - Tried to buy syringes from pharmacy past year: 16%
  - Comfort buying syringes from pharmacy: Very or Extremely, 47%
  - NHBS “Bought syringes from pharmacy”: 19%



# Local questions (IDU3)

- Depressive symptoms, high: 62%
- Drug use
  - Times inject per day: Mean 3.4, SD: 4.0
  - Times use needle before replacing: Mean 4.0, SD: 6.4
  - Skin pop (Never/Rare: 84%) or Muscle (Never/Rare: 81%)
  - Where inject on body:
    - Past month: Arm, 73%; Leg, 38%; Hand, 36%; Foot, 17%; ... Groin, 12%
    - Most often: Arm or Leg, 81%
  - Abscess in past year (0: 72%, 1-2 19%, 3+ 9%)



# Local questions (IDU3)

- Injection setting: Where
  - Shooting gallery (Ever: 38%; Most/Always: 5%),
  - Your own place (Ever: 92%; Most/Always: 71%),
  - Someone else's place (Ever: 72%; Most/Always: 12%),
  - Public (Ever: 43%; Most/Always: 9%)
- Injection setting: Who
  - By yourself (Ever: 92%; Most/Always: 47%),
  - Someone else injected you (Ever: 47%; Most/Always: 11%)



# Local questions (IDU3)

- Syringe access and disposal
  - How often you did NOT have a clean sterile needle when needed (Ever: 60%; Most/Always: 10%)
  - How many needles from needle exchange (Any: 64%; Most/All: 38%)
  - Where/how dispose (NEP 52%; Replace cap and throw away, 33%),
  - Break tip (Any: 83%; Most/Always: 61%)
- Drug treatment in past 12 months
  - 12-step or self-help groups, such as NA, AA: 44%
  - Drug treatment or detox program: 35%





# Limitations

- Cross-sectional: not same samples, not causal
- Voluntary enrollment
- Self-report
- Not RDS adjusted



# Conclusions: IDU

- Learning how to best utilize NHBS BESURE data locally
- Nice indications of prevention activity and contact with prevention/treatment services among IDU
- Continued need for attention to syringe and equipment sharing and sexual risk reduction
- HIV epidemic not resolved among IDUs in Baltimore;
  - Observed increases in HIV prevalence not entirely explained by sample demographic differences
  - Observed increases in HIV awareness should be explored further, rapid testing?
- Continued need for prevention and broadening reach of services (HIV, STI, HCV testing and care; wound care)
- Continued evidence of strong social and economic instability



# BESURE next steps

- Continued analysis
- Dissemination activities
- Round 3: HET3 2013



# With thanks to:

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