



Alberta Health
Services

Drug Use Behaviours among Vulnerable Populations in Edmonton, Alberta

Jennifer Gratrix, Sabrina Plitt, Josettie Li, Sharyn Hewitt, Patsy Conroy,
Beverly Lucki, Kelly Rocco, Salman Klar, Lily Fang, Jill Tarasuk, Barbara
Anderson, Gerry Predy, and Ameeta Singh

June 1, 2011

AB Harm Reduction Conference

Study Objectives

Enhanced Street Youth Surveillance (E-SYS): a multi-centre, enhanced surveillance system that describes the prevalence of STBBI, risk behaviours, testing behaviours, and socio-economic factors associated with STBBI infection among street-involved youth.

Enhanced Surveillance of Risk Behaviours among People who Inject Drugs (I-Track): a multi-site, enhanced surveillance system that monitors changing patterns in drug use and injecting behaviours, sexual risk behaviours, HIV and HCV prevalence, and testing behaviours among IDU.

Acknowledgments

- E-SYS & I-Track participants
- Community agencies who supported recruitment of participants
- I-Track & E-SYS study team
- BMPHO Outreach Team
- Public Health Agency of Canada

Your Thoughts

What does the data mean to you?

How does the data impact programming?

How does the data impact policy?

Are there other questions we should be asking?

Study Design

- Multi-centre cross-sectional study
- RN administered questionnaire

E-SYS:

- Urine sample for chlamydia and gonorrhea
- Blood collected for Syphilis, HBV, HIV, HCV, HSV & HTLV

I-Track:

- Dried Blood Spots tested for HIV and HCV.

Eligibility for study

E-SYS:

- 15-24 years of age
- AND have not lived at home for 3 days in the last six months.

I-Track:

- Injected drugs for non-therapeutic purposes in the preceding six months
- 15 years or older

Recruitment Sites

E-SYS (Drop-in Centres)	I-Track (NEP)
Boyle Street Co-op	HIV Edmonton/Boyle Street Coop
Old Strathcona Youth Coop	Boyle McCauley Health Centre
Youth Emergency Shelter	Bissell Centre
Women's Emergency Accommodation Centre	Kindred House
Hope Mission Youth Trailer	STD Centre

E-SYS EDMONTON RESULTS

Demographics

E-SYS					
	1999	2001	2003	2006	2010
N	284	398	298	269	200
Gender %					
Male	53.2	53.3	62.8	62.8	69.0
Female	46.8	46.7	37.2	37.2	30.5
Transgendered	N/A	N/A	N/A	0.4	0.5
Median Age y.	18	17	17	19	19
Aboriginal %	41.8	41.2	59.4	50.6	50.0
Male	34.7	40.1	56.1	45.5	42.8
Female	50.0*	42.5	64.9	58.4*	62.3*

* Significant gender difference within the phase ($p < 0.05$).

I-TRACK EDMONTON RESULTS

Demographics

I-Track		
	2005	2008
Gender %		
Male	68.0	67.3
Female	30.9	32.7
Transgendered	1.1	0
Median Age y.	38	41
Male	39	42
Female	36*	38*
Aboriginal %	70.6	65.7
Male	64.2	61.7
Female	83.5*	74.1

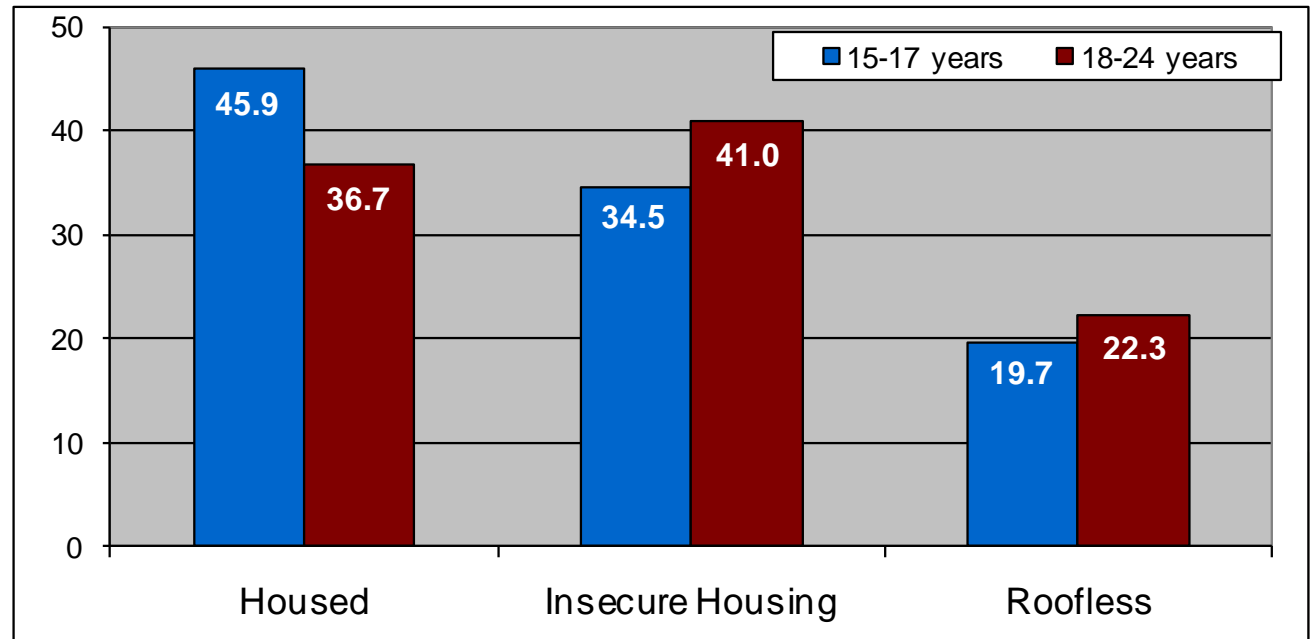
Similar to
E-SYS 2010



E-SYS EDMONTON RESULTS

Sleeping Location Most Often in the Last 3 Months

Less than half of youth slept most often at “home” in the last 3 months.



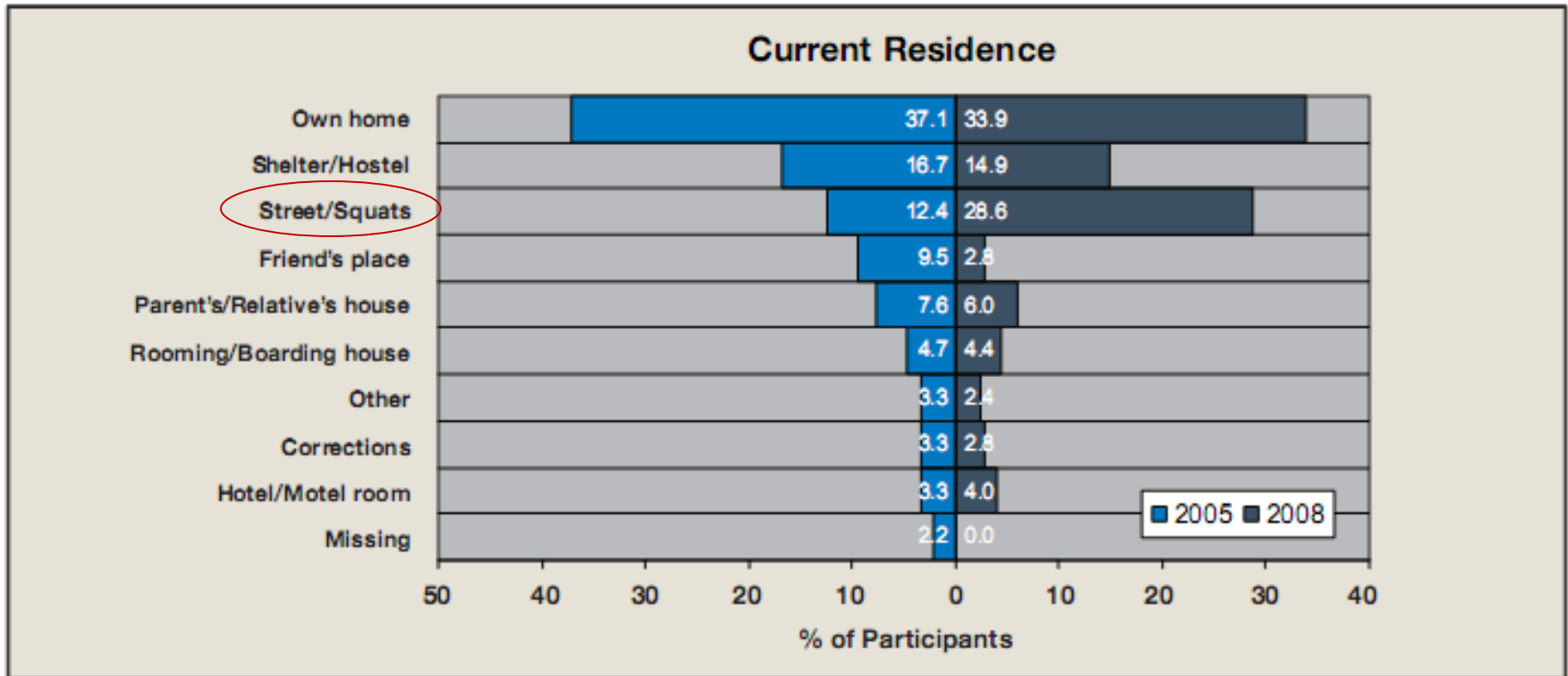
E-SYS EDMONTON RESULTS

Utilization of Social Service Supports in the Past Year (2010).

		15-17 years (n=61)	18-24 years (n=139)	Total (n=200)
Social Worker	n	31	46	77
	%	50.8	33.1	38.5
Foster Care	n	17	3	20
	%	27.9	2.2	10.0
Group Home	n	22	10	32
	%	36.1	7.2	16.0
Shelter	n	51	122	173
	%	83.6	87.8	86.5

I-TRACK EDMONTON RESULTS

Housing

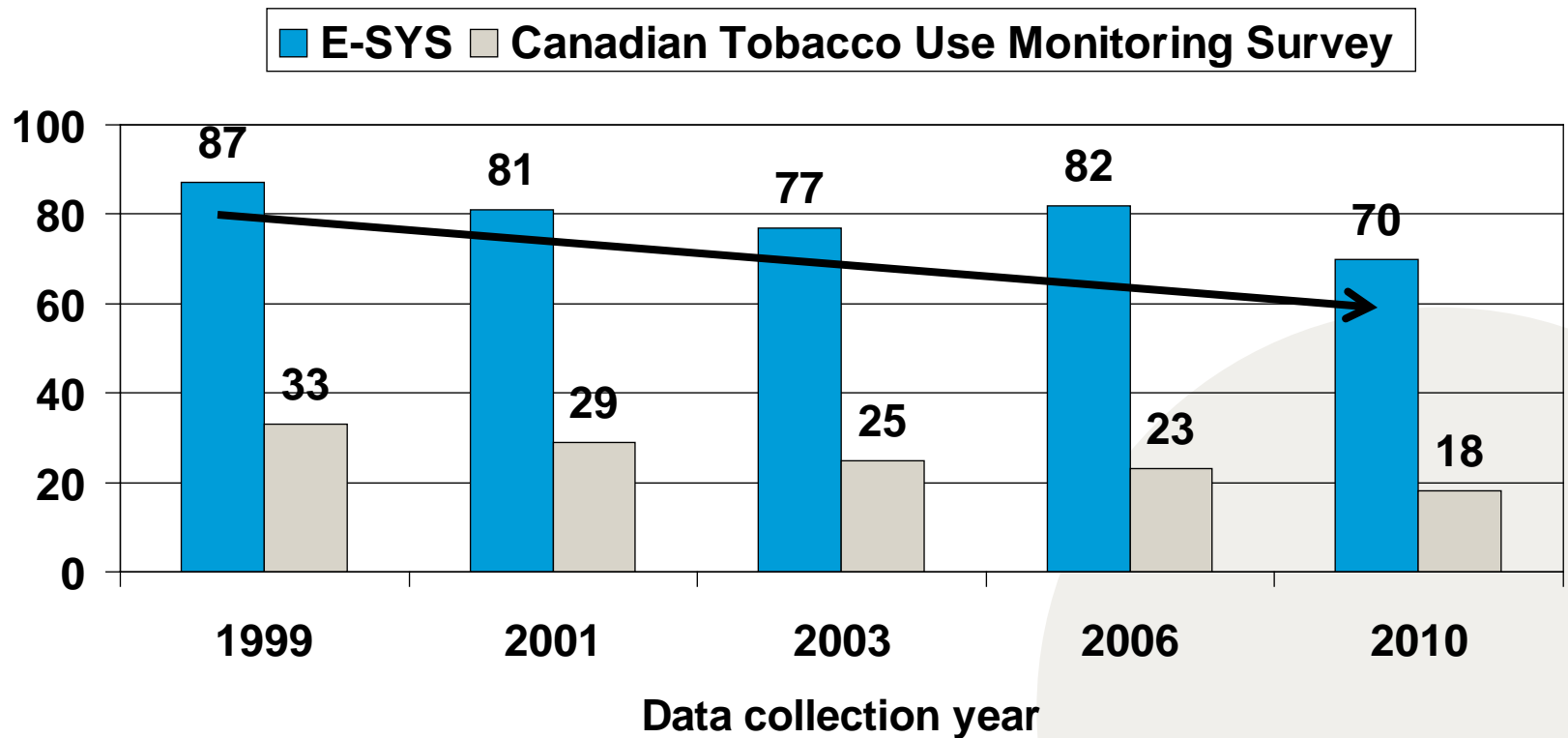


There was a two-fold increase in living on the street/squats; 28.6% in 2008 from 12.4% in 2005 (p=0.002).

E-SYS EDMONTON RESULTS

Tobacco

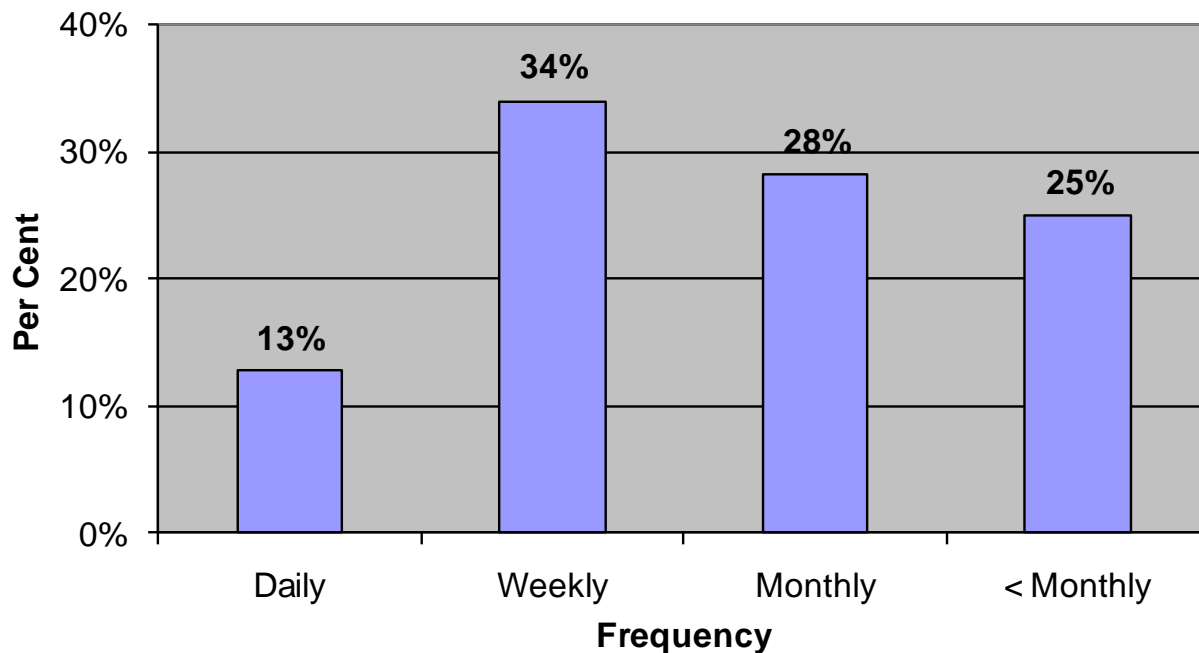
Percent of participants who reported smoking cigarettes daily by year.



E-SYS EDMONTON RESULTS

Alcohol Use (2010)

Frequency of alcohol use
in the last 12 months (n=188)



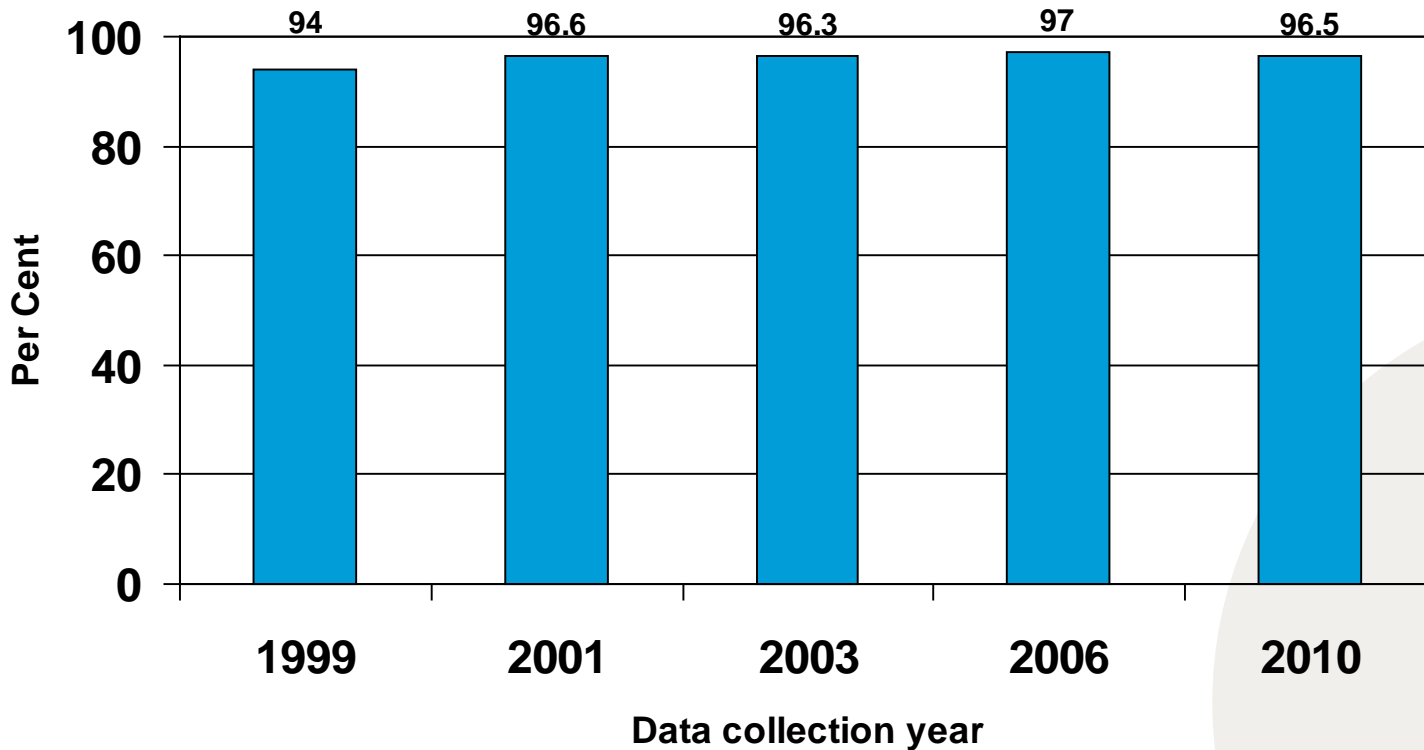
95.1% of youth
15-17 years
reported using
alcohol in the
last 12 months.

49.1% of AB
students
reported using
alcohol in the
last 12 months.
(TAYES, 2008)

E-SYS EDMONTON RESULTS

Non-Injection Drug Use

Percent of participants who reported ever using/trying non-injection drugs



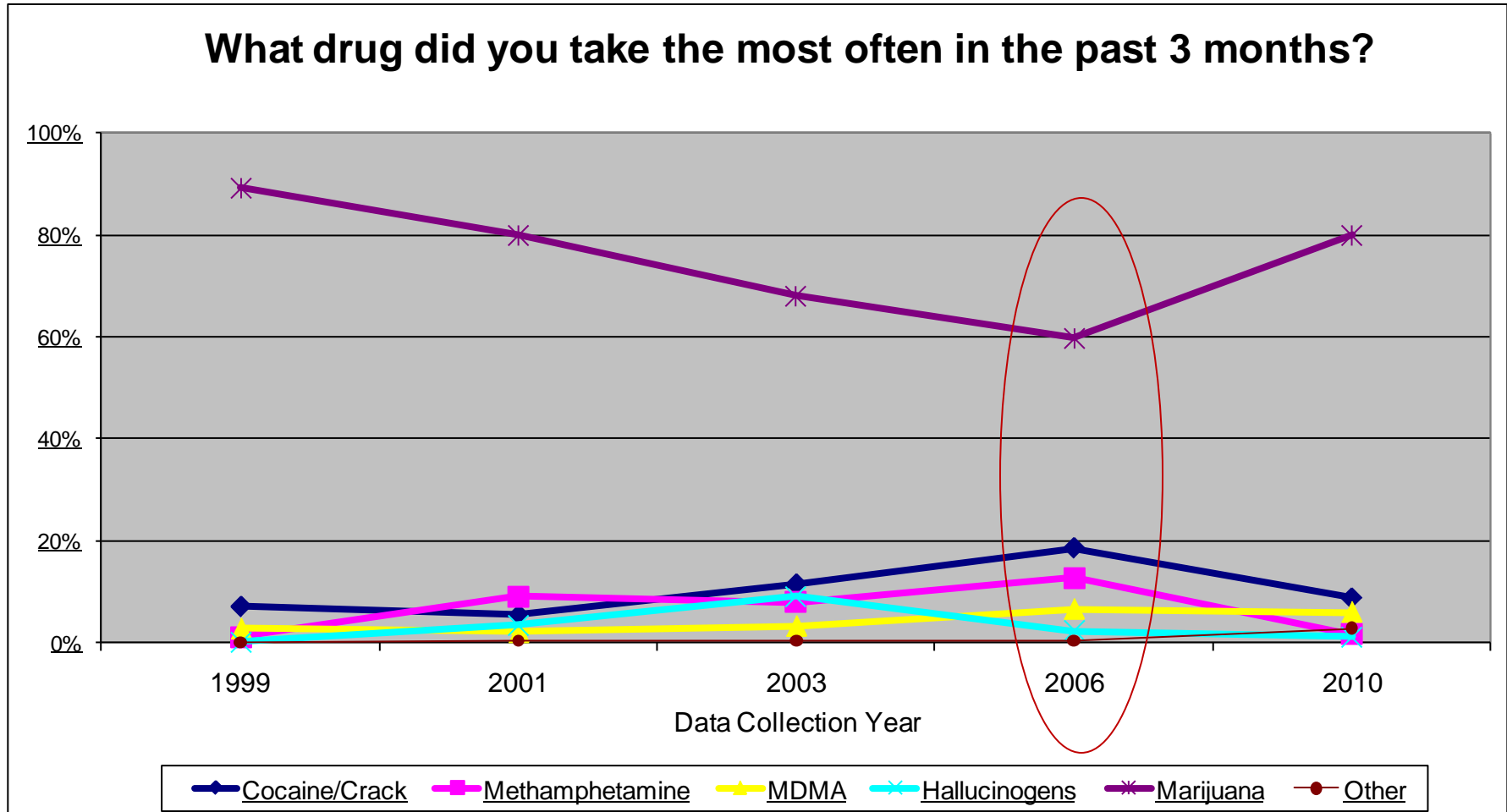
60.5% of youth use non-injection drugs daily (2010).

36% of AB students (Grade 7-12) report ever using illicit drugs.

(Source: TAYES, 2009).

E-SYS EDMONTON RESULTS

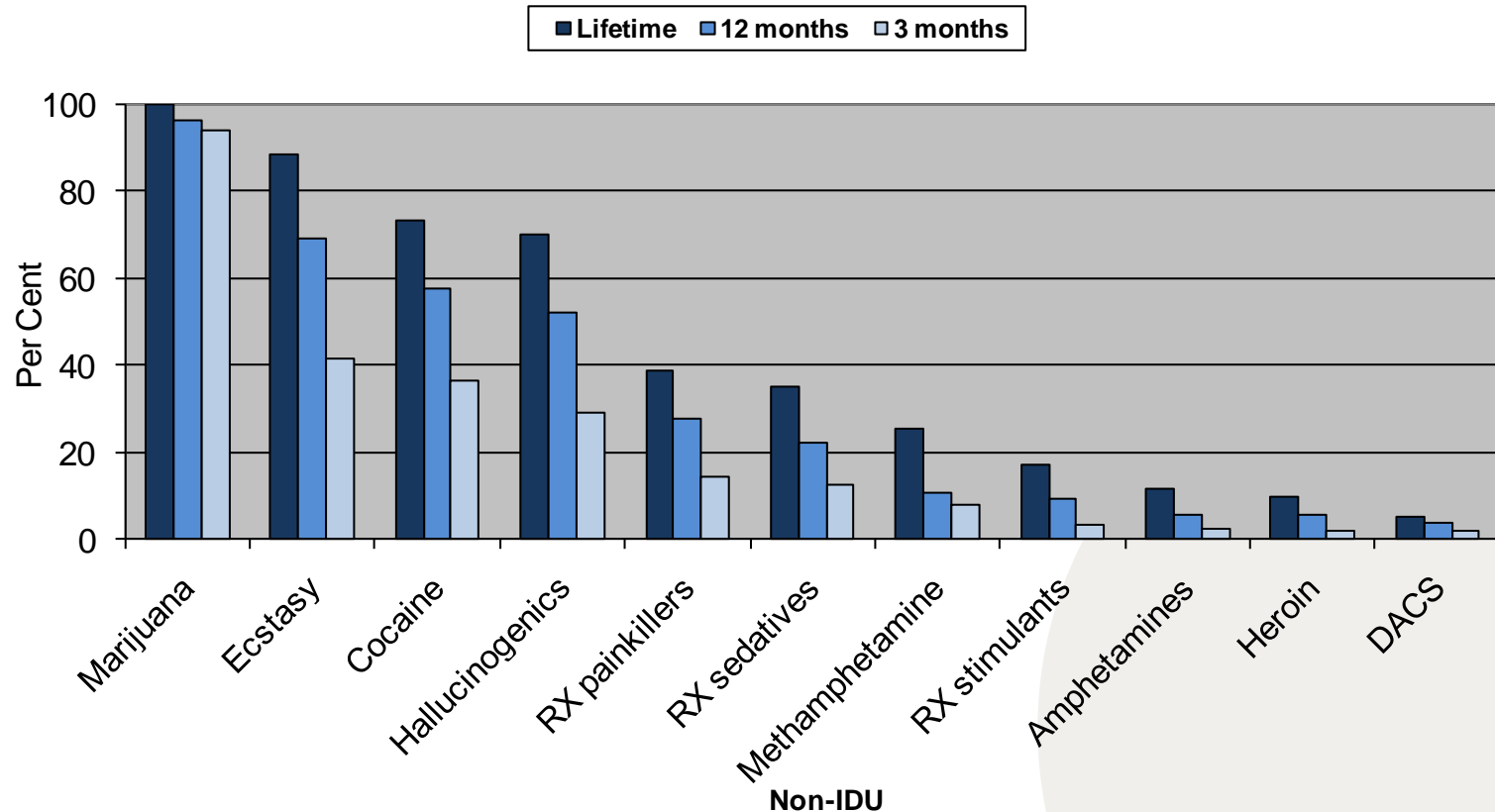
Non-Injection Drug Use



E-SYS EDMONTON RESULTS

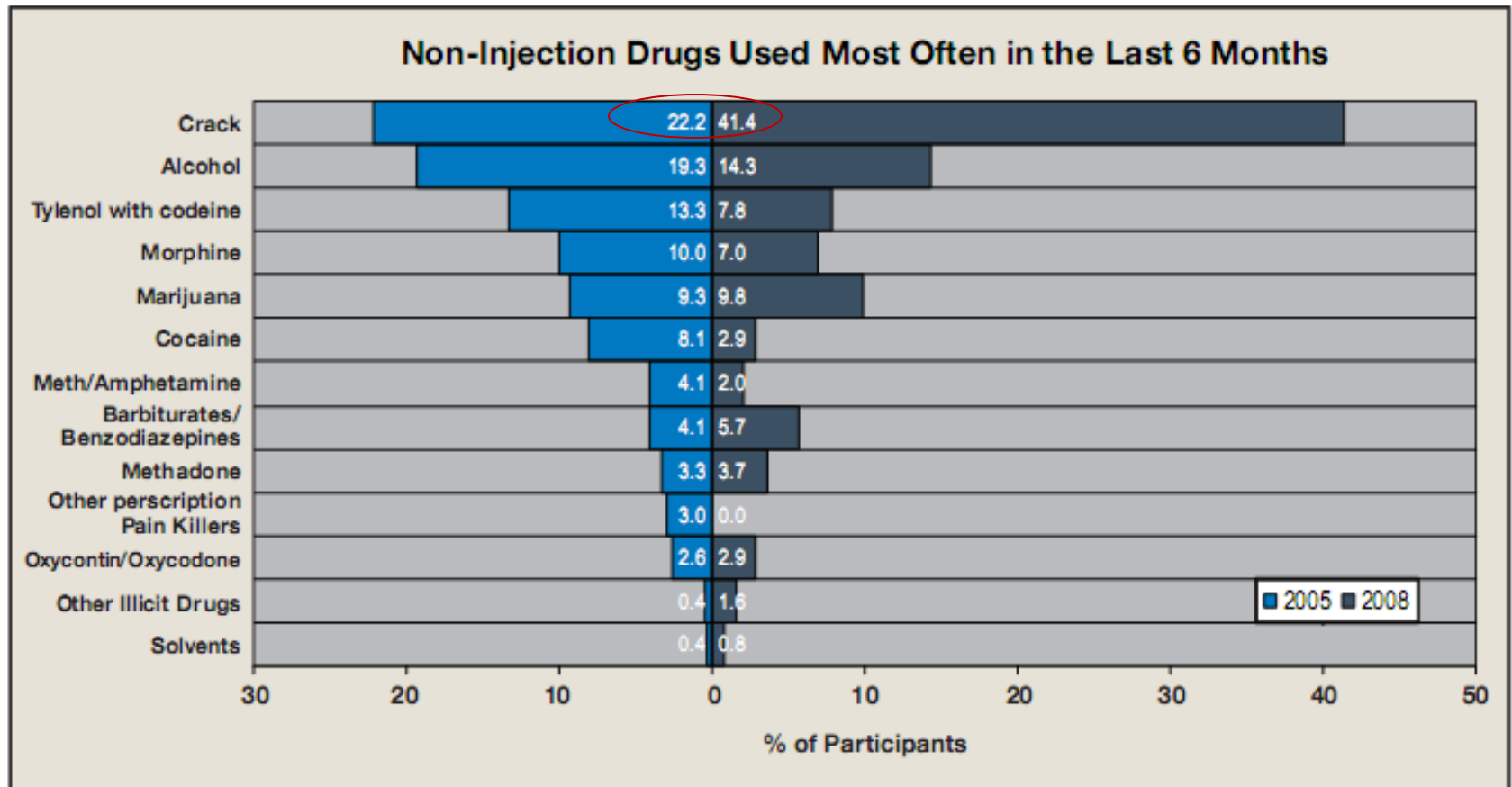
Non-Injection Drug Use

Drugs used in your lifetime and last 3/12 months



I-TRACK EDMONTON RESULTS

Non-Injection Drug Use



Crack use nearly doubled from 22.2% in 2005 to 41.4% in 2008 ($p < 0.05$).

E-SYS EDMONTON RESULTS

Injection Drug Use Variables

E-SYS					
	1999	2001	2003	2006	2010
IDU ever	15.0	13.3	13.1	17.8	14.0
15-19	12.6	8.7	8.3	10.3	8.5
20-24	20.2*	26.2*	26.6*	26.9*	24.3*
Median Age at 1st Injection	15y	15y	16y	17y	16y

* Significant age difference within the phase ($p < 0.05$).

Older youth were more likely to have injected drugs in their lifetime than younger youth.

I-TRACK EDMONTON RESULTS

Injection Drug Use Variables

	2005 n(%)			2008 n(%)		
	Total	Male	Female	Total	Male	Female
Median Age of injection initiation	19 (16-25)	18 (16-25)	21 (17-28)*	23 (17-27)	21 (17-26)	23 (17-34)*
Daily Injection	59 (21.5)	38 (20.3)	21 (24.7)	67 (27.0)	48 (28.7)	19 (23.5)
Median Injections/Day (IQR)	3 (2-5.5)	3 (2-6)	3 (2-5)	3 (2-4)	2.5 (2-3.5)	3.5 (2-5.5)*

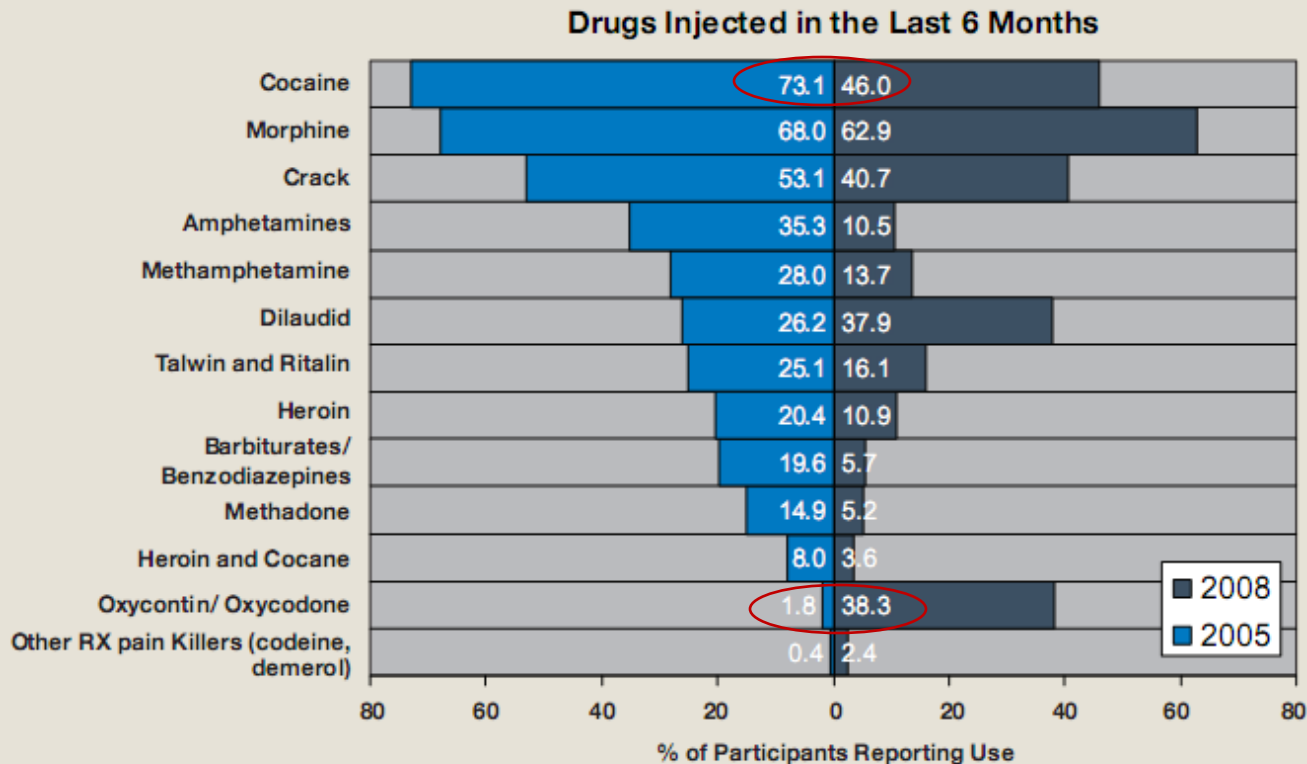
* Significant gender difference within the phase ($p < 0.05$).

Both phases: males younger age at initiation of injection.

2008: females greater median # injections/day than males.

I-TRACK EDMONTON RESULTS

Drugs Injected in the Last 6 Months

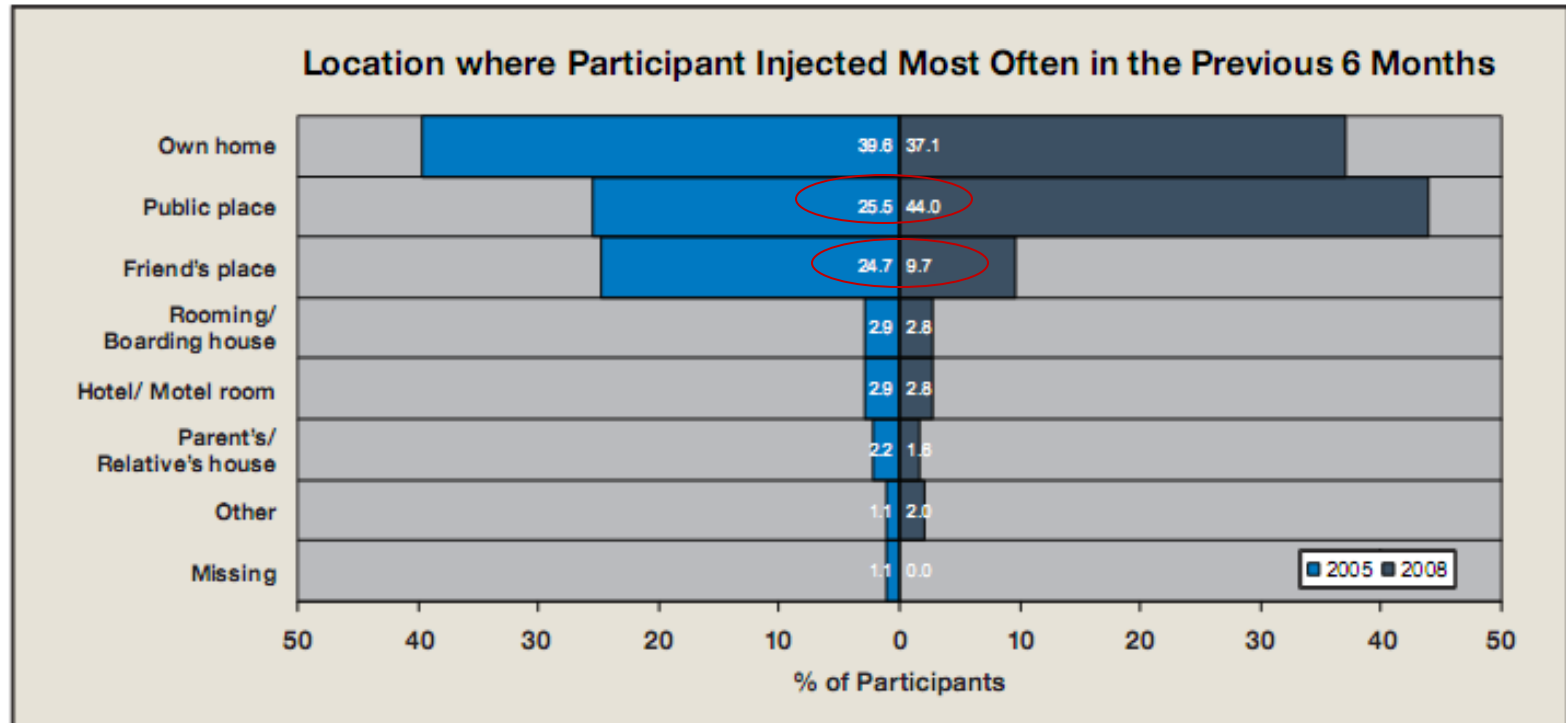


Decrease in the injection of cocaine from 73.1% to 46.0% ($p < 0.001$).

Increase in the injection of Oxycontin from 1.8% in 2005 to 38.3% in 2008 ($p < 0.001$).

I-TRACK EDMONTON RESULTS

Location of Drug Injection



Decrease in injection at a friend's place (24.7% in 2005 to 9.7% in 2008, $p < 0.05$).

Increase in public places (25.5% in 2005 to 44.0% in 2008, $p < 0.05$).

I-TRACK EDMONTON RESULTS

Injection Drug Use Partners

	I-Track					
	2005			2008		
	Total	Male	Female	Total	Male	Female
Injects Most Often with Sex Partner	20.2 (55)	13.9 (26)	34.1 (29)*	27.0 (67)	21.0 (35)	39.5 (32)*
Injects Most Often with No One	26 (71)	26 (48)	27.1 (23)	41.5 (103)	47.3 (79)*	29.6 (24)
Injected by Someone Else	-	-	-	35.9 (88)	29.5 (49)	49.4 (39)*

* Significant gender difference within the phase ($p < 0.05$).

E-SYS EDMONTON RESULTS

Injection Drug Use Variables

	2003 n=38 (%)	2006 n=47 (%)	2010 n=26 (%)
Someone else injects me	18 (47.4)	29 (61.7)	9 (34.6)
Male	11 (44.0)	16 (66.7)	3 (33.3)
Female	7 (53.8)	13 (56.5)	6 (66.7)*
Injected with a used needle		11 (23.4)	5 (19.2)

* Significant gender difference within the phase ($p < 0.05$).

I-TRACK EDMONTON RESULTS

Sharing Injection Equipment

In the past 6 months....	2005 n(%)	2008 n(%)
Injected with a used needle	24 (8.7)	49 (19.8)
Whose needle did you use most often		
Sex Partner	7 (29.2)	25 (55.6)
Close Friend	9 (37.5)	12 (26.7)
Family	3 (12.5)	4 (8.9)
Acquaintances/Strangers	4 (16.6)	4 (8.9)

2.5 fold increase in used needles (8.7% in 2005 to 19.8% in 2008 (p<0.05)).

Males: used needles increased 4 times from 2005 (3.7%) to 2008 (16.8%, p<0.001).

I-TRACK EDMONTON RESULTS HIV and HCV Seroprevalence

	2005 n(%)			2008 n(%)		
	Total	Male	Female	Total	Male	Female
HIV+ [§]	65 (23.9)	39 (21.2)	25 (29.4)	32 (13.0)	21 (12.7)	11 (13.6)
HCV+	181 (66.1)	119 (64.0)	60 (70.6)	171 (69.2)	120 (72.3)	51 (63.0)

[§] Significant difference between phases (p<0.05)

E-SYS EDMONTON RESULTS

HIV and HCV Seroprevalence

E-SYS n(%)					
	1999	2001	2003	2006	2010
HIV	0	2 (0.8)	2 (0.7)	2 (0.8)	0
HCV	3 (2.3)	7 (2.8)	5 (1.7)	13 (4.9)	1 (0.5)

SUMMARY

- **Overall:** Disproportionate representation of aboriginal persons requiring programming to be done with Aboriginal communities.
- **E-SYS:** Prevention needs to be targeted at youth to prevent initiation of illicit/street drugs including injection drugs.
- **I-TRACK:** A change in drug use was observed between 2 cross sectional surveys of IDU in Edmonton with decline in injection of crack and increase in injection of Oxycontin. Also increase in non injection use of crack.
 - Increase in public injection and use of used needles (particularly among females)
 - Decline in HIV seroprevalence (likely multi-factorial)

CONCLUSIONS/RECOMMENDATIONS

Our data support the need for:

- ongoing programming including the promotion of safe needle exchange practices and needle exchange programs in Edmonton
- novel ways to address social determinants of health to delay or prevent illicit drug use in street youth and other vulnerable populations in Edmonton
- non traditional ways to reach vulnerable populations to offer health services including testing for STI/BBP

For Additional Information

- **I-Track**
 - **National Report**
 - http://www.phac-aspc.gc.ca/i-track/sr-re-1/pdf/itrack06_e.pdf
 - Seroprevalence and correlates of HIV and HCV among injecting drug users in Edmonton, AB. *CJPH* 2010;101(1):50-55.
 - Local PI: Dr. Ameeta Singh
 - **E-SYS: Reports on Street Youth in Canada**
 - <http://www.phac-aspc.gc.ca/sti-its-surv-epi/youth-jeunes-eng.php>
 - Local PI: Dr. Predy

Your Thoughts

What does the data mean to you?

How does the data impact programming?

How does the data impact policy?

Are there other questions we should be asking?