

Project LINC

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Center for Community Health, Division of Epidemiology, Bureau of HIV/AIDS Epidemiology

LINC

Long Islanders Now Connected

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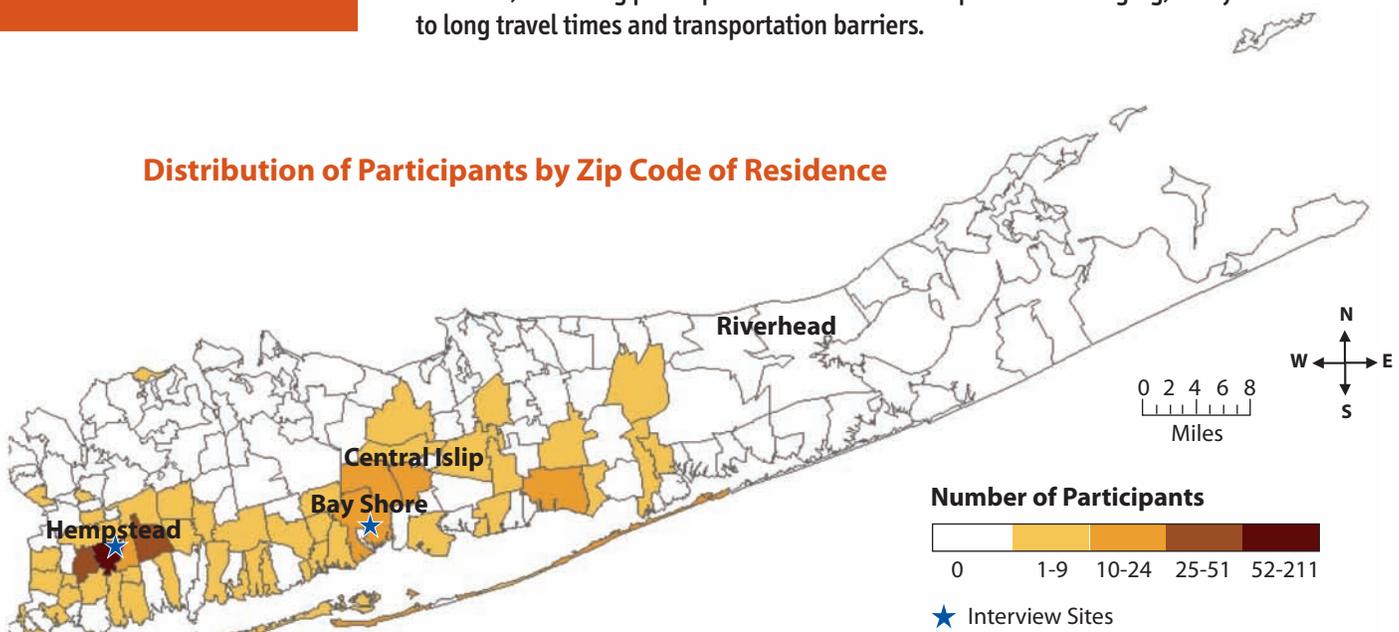
National HIV Behavioral Surveillance (NHBS) System, Injection Drug Use (IDU) Cycle, Long Island NY, 2005

NHBS is a collaboration between CDC (Centers for Disease Control and Prevention) and health jurisdictions across the country. The project is designed to monitor behaviors that put members of three high prevalence groups at risk for HIV (i.e., Men who have Sex with Men [MSM], IDUs and heterosexuals [HET] in high prevalence areas). Health surveys are conducted on a rotating annual schedule. During the IDU cycle, 25 national sites participated in data collection. Participants were recruited using the peer referral system, Respondent-Driven Sampling (RDS). RDS is based on the assertion that peers are effective recruiters for members of hard-to-reach populations. Sample data was used to make estimates about social networks and social network information was used to statistically derive population estimates. Eligible participants were at least 18 years of age or older, resided in Nassau or Suffolk counties, and injected drugs in the 12 months preceding the interview. The final sample size totaled 484 injectors. The mean age of sample participants was 43 years and the mean age at first injection was 22 years.

Geographic Distribution of Participants

The map below illustrates the utility of recruiting members of hard-to-reach populations using RDS. Recruitment began with 12 “seeds” (i.e., individuals recruited by project staff) from 6 ZIP codes. Fifty-eight percent of seeds were successful at recruiting their peers. The colored areas represent the ZIP codes of residence of study participants; interview sites are depicted with the star symbol. Using RDS, we recruited a sample of individuals who live across the Island. However, recruiting participants from the east end proved challenging, likely due to long travel times and transportation barriers.

Distribution of Participants by Zip Code of Residence



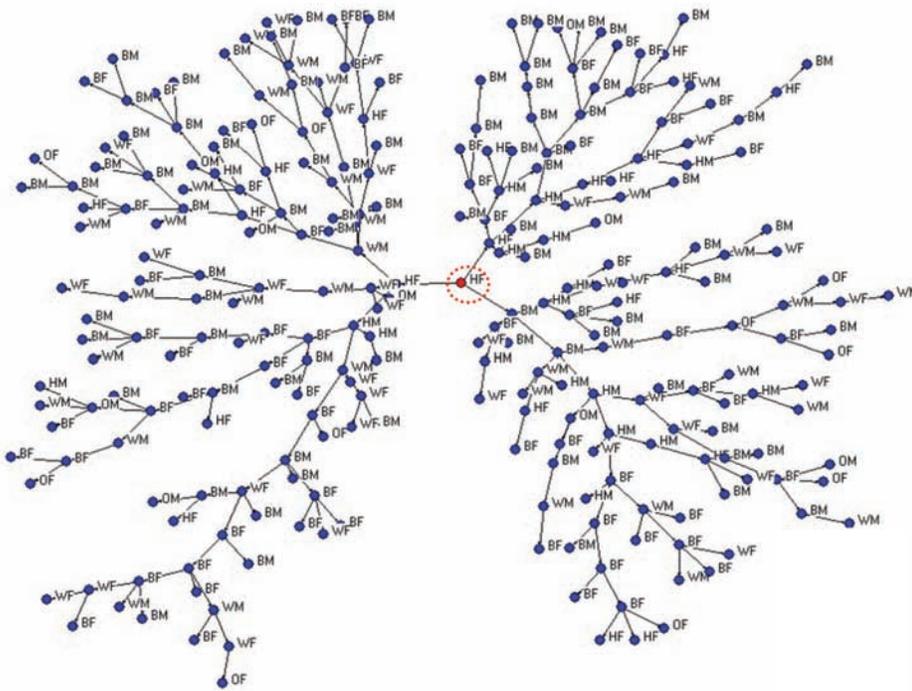


Figure 1. Selected Recruitment Network
This network diagram depicts the gender and racial characteristics of the most successful recruitment chain in the sample. Recruitment began with the seed, shown here as a red sphere, and expanded to include a range of ethnically and racially diverse injectors.

LEGEND

B = Black	M = Male
W = White	F = Female
H = Hispanic	Red = Seed
O = Other	Blue = Recruit

Approximately half of the sample (49%) self identified as Black, 27% as White, 18% as Hispanic, 6% as multiracial, 0.8% as American Indian/Alaska Native, 0.2% as Asian/Pacific Islander, and 0.2% as other races. Males accounted for 58% of recruits. Anecdotal reports from the planning phase of the project indicated that there were very few “young” injectors on the Island. Sample data showed only 1% of recruits between ages 18 and 24 years.

Approximately 1/3 of study participants had less than a high school education while 40% held high school or GED degrees; 27% had some college or held higher level degrees.

Poverty was common among study participants. Individuals with an annual household income of less than \$20k accounted for 67% of the sample.

In general, sample proportions for the demographic characteristics of injectors on Long Island were a close approximation of the estimated population proportions (±2%). For example, our population estimates show that Blacks (49%) comprise the majority of IDUs on the Island, Whites represent approximately 26% of injectors, and Hispanics account for approximately 17%. It appears however, that injectors who earn <\$10k are over represented in our sample (in that these were 37% of the sample compared to a population estimate of 28%).

	Sample Proportion % (N)	Estimated Population Proportion % (95% CI)
Race		
Black	49% (236)	49% (43.7, 57.3)
White	27% (129)	26% (20.4, 32.0)
Hispanic	18% (86)	17% (12.0, 22.4)
Multiracial	5% (27)	6% (3.2, 7.8)
American Indian/Alaska Native)	0.8% (4)	**
Asian/Pacific Islander	0.2% (1)	**
Other	0.2% (1)	**
Gender		
Male	58% (281)	56% (49.3, 61.1)
Female	42% (203)	45% (38.9, 50.7)
Annual Income (N=493*)		
<10k	37% (178)	28% (22.7, 33.8)
10k- <20k	30% (143)	36% (29.9, 41.4)
20k- <30k	13% (63)	14% (10.1, 18.5)
>=30k	19% (92)	23% (17.1, 27.6)
Education		
≤ 11th Grade	33% (158)	35% (29.5, 40.5)
12th Grade or GED	40% (194)	39% (32.6, 44.0)
Some college or higher level degree	27% (132)	27% (21.7, 32.1)
Age		
18-24	1% (5)	1% (0.1, 3.3)
24-34	14% (67)	12% (9.0, 15.4)
35-44	40% (195)	43% (37.6, 49.5)
45-54	33% (158)	32% (26.9, 37.4)
>=55	12% (59)	11% (7.6, 14.6)

*“Missing”/“Refuse to answer”/“Do not know”, and participants selected by project staff were excluded from the analysis. Twenty-two surveys with short interview times (< 10 minutes) were included in the analysis as a missing group but excluded from the final sample totals. Categories are not mutually exclusive.

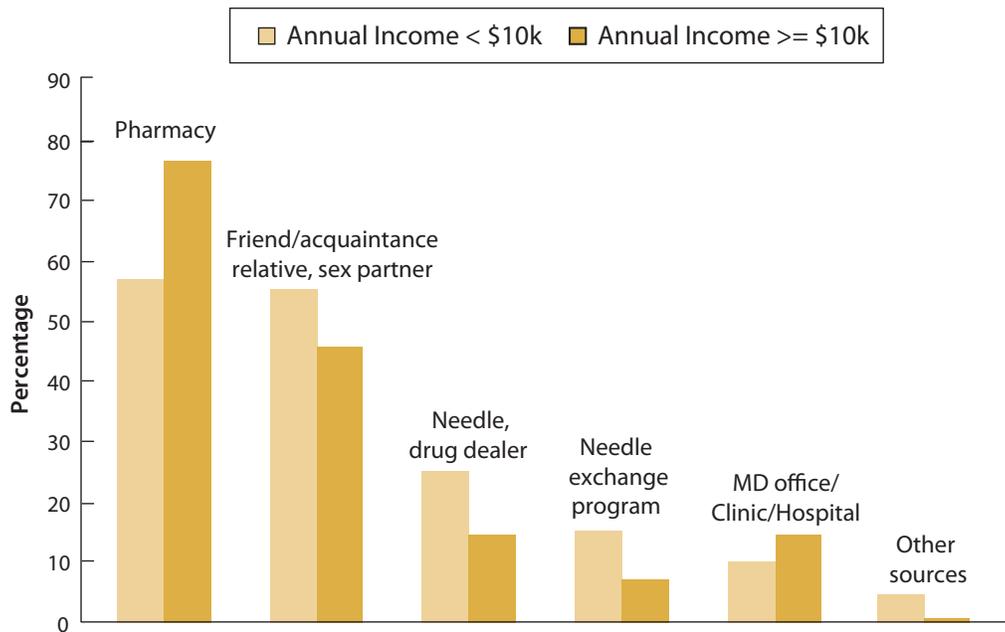
**Too small to estimate

Pharmacies were highly utilized as a source for obtaining needles; almost 70% of the sample reported using them in the past 12 months. Even though Long Island has no needle exchange, 12% of the sample reported using one in the past year (likely in the New York City border counties of Kings and Queens). Obtaining needles from friends (53%) or similar sources was popular among local injectors. This finding clearly demonstrates that many users remain tied to these potentially unsafe means of obtaining needles. Please note that participants were asked to select all categories that applied to their usage habits. An individual could therefore fall into one or numerous categories.

	Sample Proportion % (N)	Estimated Population Proportion % (95% CI)
Pharmacy	70% (339)	71% (64.7, 76.0)
Friend, acquaintance, relative, sex partner	53% (255)	49% (43.6, 54.5)
Needle or drug dealer, shooting gallery, hit house, off the street	19% (90)	17% (12.9, 22.5)
MD office, clinic, hospital	13% (61)	14% (9.9, 18.9)
Needle exchange program	12% (60)	10% (6.4, 13.0)
Other sources	3% (14)	2% (0.9, 3.6)

*"Missing"/"Refuse to answer"/"Do not know", and participants selected by project staff were excluded from the analysis. Twenty-two surveys with short interview times (< 10 minutes) were included in the analysis as a missing group but excluded from the final sample totals. Categories are not mutually exclusive.

Figure 2. Population Estimates of Sources for Obtaining Needles by Annual Income



Participants who reported at least \$10k annual income were more likely to obtain needles from pharmacies, MD offices and similar sources. On the other hand, participants who reported

less income relied more heavily on potentially unsafe sources such as friends and drug dealers.

Approximately 32% of sample participants utilized some form of alcohol or drug treatment program while 68% did not. Methadone maintenance (17%), detoxification (14%), drug free outpatient clinics (14%), and Narcotics Anonymous (13%) were most utilized by injectors. Not surprisingly, residential treatment (5%) was much less utilized. Population estimates suggest that individuals who utilized drug and alcohol treatment programs are over-represented in the sample (32%). According to estimates only 22% of the broader IDU population utilized drug and alcohol treatment programs within the past 12 months.

Table C. Services Used by Injection Drug Users in the Past 12 months, %Yes (N=484*)

	Sample Proportion % (N)	Estimated Population Proportion % (95% CI)
Alcohol or Drug Treatment Programs	32% (153)	22% (16.2, 28.7)
Programs include:		
Detoxification	14% (70)	11% (7.8, 14.9)
Drug free outpatient clinic	14% (66)	11% (6.9, 15.1)
Methadone maintenance	17% (83)	10% (6.0, 14.8)
Narcotics/Cocaine Anonymous	13% (62)	9% (5.6, 12.0)
Alcoholics Anonymous	11% (51)	8% (4.6, 11.2)
Inpatient drug treatment	10% (48)	7% (4.5, 10.0)
Residential treatment	5% (22)	3% (1.4, 5.0)

*"Missing"/"Refuse to answer"/"Do not know", and participants selected by project staff were excluded from the analysis. Twenty-two surveys with short interview times (< 10 minutes) were included in the analysis as a missing group but excluded from the final sample totals. Categories are not mutually exclusive.

Additional Findings

HIV Testing

Eighty one percent of the sample reported testing for HIV at least once during their lifetime. More than half of the sample (66%) reported being tested for HIV in the past two years and 46% reported testing within the past 12 months. The majority of those who did not test felt they were low risk. By self-report the prevalence of HIV among study participants was 7%. The self-reported prevalence of sexually transmitted infection was 19%.

Sharing Behaviors

Approximately 38% of the sample reported sharing drug paraphernalia during the past 12 months (i.e., cookers, cotton, water, needles, and syringe). The items most often shared were cookers (31%), water (21%), cotton (20%), and needles (20%). Frequent injectors were more likely to share drug paraphernalia compared to less frequent injectors (43% of daily injectors vs. 30% of non-daily injectors, p-value .005).

Current Research Activities

The 2008 project cycle for NHBS activities on Long Island focused on men who have sex with men (MSM). Formative research activities were conducted from May to July 2008 and data was collected from September through December. The project team used venue-based sampling to interview over 300 men across the Island.

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