

Report 2005-3



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Service Gaps and  
Service Utilization in  
New York City:  
Wave 2 Update

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**C.H.A.I.N. REPORT**

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## **Structure of this Report**

This CHAIN report provides follow-up data to an earlier report, “Service Gaps and Service Utilization in New York City” (Report 2004-1), that was based on baseline data. This report contrasts the gaps and service utilization reported in the first and second rounds. There are two primary sections within this report – Service Gaps and Service Utilization. The service gaps section focuses on twelve sentinel measures across six major service categories (health, case management, housing, mental health, alcohol or drug treatment, and transportation), covering tables 2 through 10. The service utilization section (table 11) examines service use patterns for individuals in the CHAIN cohort at the two rounds of data collection. A final table (table 12) explores the possible bias in our findings as a consequence of loss-to-follow-up; in other words, are apparent improvements (such as fewer service gaps) really a function of losing touch with respondents who had that particular service gap.

For most of these analyses, data were drawn from the second round of NYC CHAIN cohort II survey. For a description of the sampling strategy, study protocols, and cohort characteristics see CHAIN Report 2004-3, New Cohort Summary. 548 respondents were interviewed in 2004 - 2005 as a follow-up to the baseline interview, which was conducted with 693 respondents in 2002 - 2003.

Several important caveats are in order for any reader. One should use great caution in interpreting any numbers or percentages in which the denominator (that is the size of the subgroup) is smaller than 50 people. In such instances, percentages will vary greatly, not be comparable or equivalent to groups greater than 50, and generally be very unstable.

Finally, where possible we have indicated statistically significant differences with the use of asterisks. Our convention is that a plus mark(+) is significant at .10 level, a single asterisk(\*) at the .05 level, two asterisks(\*\*) at the .01 level, and three asterisks(\*\*\*) at the .001 level. Statistical significance means that the differences between the numbers being compared are greater than might occur simply by chance, and likely represent a real difference.

### ***1. Service Gaps***

Table 1 illustrates how needs and service gaps have been defined for 12 sentinel measures. These measures were selected and refined after a series of public presentations in both New York City and Tri-County as well as the convening of a Tri-County provider advisory group and consultation with the Westchester Department of Health and with the CHAIN Technical Review Team. They are not intended to cover every service funded within an HIV system of care, but rather to represent guideposts for assessing the system. These measures were also limited by the data collected in the CHAIN survey, which although it includes over 900 variables is still dependent upon a respondent’s self-report. As such, a service gap may not measure directly whether the client received a particular service, but rather whether the client *perceived* receiving a specific service. This still provides powerful evidence. If a client believes that he or she has not received any case management (and cannot even identify anyone who has attempted to help them), one could argue that even if a case manager has provided services for a client it has likely had little impact.

CHAIN data may be used to measure “subjectively expressed” and “objectively

assessed” needs. To illustrate, if a client reports that she needs or has sought out housing services, that is subjectively expressed by the client herself. If, on the other hand, a client reports that she has been unstably housed in the past 6 months – perhaps doubled-up on a friend’s couch – that would be regarded as an objectively assessed need. If either is present, the client is regarded as having a need for housing services. A service gap would exist if the client reported that she had not received any housing services in the prior six months or she isn’t living in specialized AIDS housing (which could be construed as a potential “solution” to her housing problems). For some health services, such as comprehensive medical care and patient/provider communication, it has been assumed that all HIV-positive adults have a presumptive need for that service.

## 2. *Service Utilization*

As illustrated in the notes to Table 11, service utilization data refer to client-reported services in the 6-month period preceding the interview, and are reported for the second round of interview (n=548). Several service categories, such as hospice or outreach activities, were excluded because CHAIN data cannot adequately capture them. The utilization data are not contingent upon self-reported need. In other words, an individual may report mental health services even if there are no subjective or objective expressions of need for mental health services. Subgroup comparisons are provided by gender, race/ethnicity, HIV risk, age group, and borough. As noted above, in some instances the absolute number of individuals in a group may be too small to reliably note proportional differences (particularly vulnerable are groups with fewer than 50 individuals).

### **Key Findings**

#### 1. Service gaps

- In order to establish a service gap, we first identify the people with a specific need, and then look to see how many with that need are not receiving the corresponding service. That proportion, of “not receiving service” divided by all those with a need, represents the service gap. In first looking at need, the areas of greatest need are comprehensive medical care (100% of respondents have a need for comprehensive medical care), patient/provider communication (100%), comprehensive case management (72%), treatment adherence (75%), and alcohol and drug treatment (74%) (see Table 2).
- Among people with a specific need, those areas with the greatest proportion of people not reporting a corresponding service are transportation services (78%), alcohol or drug treatment (69%), and professional mental health (55%) (see Table 2).
- One can estimate an “absolute” measure of service gap ranking by multiplying the service gap proportion by the proportion with need (see Table 2). The top five service gaps for the cohort are:
  1. alcohol or drug treatment (51% of the entire cohort)
  2. comprehensive case management (34%)
  3. patient/provider communication (33%)
  4. comprehensive medical care (32%)
  5. case management service for counseling (21%)

- In comparing the second the first rounds of interviews (Table 2), the need for services and service gaps have remained fairly constant. This suggests that on the whole the system of care, as experienced by members of the CHAIN cohort, has neither improved nor declined in terms of meeting client needs between 2002 and 2005. This is a summary statistic, though, and does not mean that a given individual has not had his or her needs met over time. Instead, a reader may infer from the data that the overall burden of needs and gaps has remained relatively consistent.
- Tables 3 and 4 focus specifically on case management service gaps, since case management provides a coordinative function among the ancillary services, and is hypothesized to be central to any HIV care system. In looking at subgroup differences, the only statistically significant difference exists among residential places. The respondents in Manhattan with a need report the largest rates of service gaps (56%), whereas the respondents in Staten Island report a smallest proportion (18%). Table 4 illustrates the central role played by comprehensive case management. Those individuals who have a comprehensive case management gap also have significant service gaps in comprehensive medical care and supportive mental health. Although not statistically significant, there is also a trend to greater service gaps in professional mental health and permanent housing among those individuals with a comprehensive case management service gap.
- Table 5 illustrates which subgroups are significantly more likely to report specific needs or service gaps. In general, there is no single subgroup which appears to be more disadvantaged than another, which suggests that needs and service gaps may arise for reasons other than membership in a particular subgroup. Women express a greater need than men for professional mental health and transportation services, while men indicate a greater service need than women for antiretroviral therapy and AOD treatment. However, there is no significant difference found in service gaps between women and men.
- Tables 6 through 10 represent the findings from a series of logistic regression analyses which considered how a variety of factors are related to particular service gaps – gender, race/ethnicity, household income, high school education, age, children in the household, unstable housing, drug use, residential boroughs, mental health, T-cell counts, opportunistic infections, and delay seeking HIV medical care post-diagnosis, all things being equal. Among the key findings:
  - Men have fewer service gaps than women. Men are less likely than women to experience service gaps in treatment adherence (OR=0.48), comprehensive case management (OR=0.58), and counseling case management (OR=0.61).
  - There is no race/ethnic difference found in service gaps, except for the service area of supportive mental health. Latinos report service gaps at a rate almost six times greater than white respondents (OR=5.92) in supportive mental health services.
  - Younger individuals (20-34 years old) are more likely to experience comprehensive medical care and medical communication service gaps than older people.
  - The respondents with children under the age of eighteen are less likely to experience

service gaps in treatment adherence and counseling case management than those without children.

- Brooklyn and Staten Island residents are less likely to experience comprehensive medical care service gaps than the reference group in Manhattan, and Bronx residents are more likely than others to experience medical communication service gaps.

- Individuals with very low mental health scores or household income below \$10,000 are more likely to experience transportation service gaps.

- Individuals with recent opportunistic infection are less likely to have service gaps in comprehensive medical care and comprehensive case management services, while they are more likely to have treatment adherence service gaps.

## 2. Service Utilization

- The majority of CHAIN respondents used primary medical care (97%), case management (73%), and mental health services (50%), as illustrated in Table 11. Thirty nine percent of respondents used dental care services and 34% have used ER services at least once during the last six months. Legal services and transportation services are reported by relatively few people in the cohort (8% and 2% of cohort respectively).
- There are no significant differences in service utilization between round 2 interviews (2004-2005) and the baseline interviews (2002-2004), although the proportions of service utilization for mental health care and housing services have decreased by five percent.

## 3. Attrition Analysis

- Table 12 compares the needs and service gaps at baseline between two groups – those who were interviewed again in Wave 2, and those who were lost to follow-up. This analysis attempts to judge how much changes in need and service gaps between the two rounds of interviewing may be explained by cohort attrition. In examining the needs for services, the individuals lost to follow-up were more likely to have reported need for comprehensive case management, AOD treatment, or transportation than were those who were interviewed. Among those with service gaps, individuals lost to follow-up were far more likely to have reported professional mental health gaps (84%) than were those who were interviewed at the second round (57%). These findings serve as a counter-balance to those reported in Table 2, given that the drop in professional mental health service gaps from 63% to 55% illustrated in Table 2 may reflect the loss of individuals in the cohort who had that service gap, rather than the system actually meeting their needs. Conversely, in those areas where the needs and gaps remain relatively consistent across rounds even in the face of attrition from the cohort of individuals with those needs and gaps, it suggests that the problems may be getting worse.

**Table 1. Measuring Needs & Service Gaps – Definitions**

<b>Service</b>	<b>NEED</b>	<b>SERVICE GAP</b>
<b>HEALTH</b>		
Comprehensive medical care	Positive HIV serostatus	Primary HIV medical provider does not provide ALL of the following: (1) Routine check-ups, well visits, vaccinations, (2) Source of health advice, (3) 24-hour access for medical emergencies
Patient/Provider communication	Positive HIV serostatus	Patient doesn't know t-cell or viral load, OR says current doctor "could do a better job explaining my treatment options to me"
Treatment adherence	On antiretroviral medications	Among non-adherent, not receiving treatment adherence services
Antiretroviral therapy	T-cell less than 200	Not on antiretroviral combination therapy
<b>CASE MANAGEMENT</b>		
CM: Comprehensive care model	(1) Current drug user OR (2) very low mental health score OR (3) recent episode of unstable housing OR (4) experienced a barrier to medical or social service because didn't know where to go, couldn't get child care, couldn't get transportation, or couldn't afford care or (5) says there's not enough money in the household for rent, utilities, food, or clothing	Among those with a need, no CM developed a care plan, assisted in getting or referring client to social services, or helped fill out forms for benefits or entitlements in past 6 months
CM: Counseling model	(1) Scored very low on mental health score OR (2) current drug user OR (3) practiced unsafe sex in past 6 months	Among those with a need, no CM counseled client regarding personal life, drug or alcohol problems, practicing safer sex, or periodically checked up on client in past 6 months
<b>HOUSING</b>		
Financial Housing Services	(1) Fairly often or very often not enough \$\$\$ for rent, OR (2) reported that s/he needed help with eviction, paying rent, or maintaining rental subsidy	No housing service received, OR client not living in specialized AIDS housing
Permanent Housing Services	(1) At least one episode of unstable housing or doubled-up in past 6 months, OR (2) reported that s/he needed help related to homelessness, critical need to move, physical access issues, poor housing quality, or dangerous neighborhood	No housing service received, OR client not living in specialized AIDS housing

Service	NEED	SERVICE GAP
<b>MENTAL HEALTH</b>		
Professional Mental Health	Scored very low on a mental health score (Mental component summary (MCS) $\leq$ 37.0)	Respondent did not report receipt of professional MH service (psychiatrist, psychologist, therapist, therapeutic social worker) in prior 6 months
Supportive Mental Health	Scored above 37.0 on mental health score AND (1) reported a need for help with emotional or psychological problems OR (2) felt counseling regarding sexuality and sexual issues was considerably or extremely important OR (3) strongly disagreed that "most of the time I am in firm control of my feelings and behavior"	Respondent did not report receipt of supportive MH service (support groups, clergy, case managers, peer workers) in prior 6 months
<b>ALCOHOL OR DRUGS (AOD)</b>		
AOD	(1) Current drug or heavy alcohol user OR (2) client said that treatment or further treatment is "considerably" or "extremely" important	No reported therapeutic or self-help AOD treatment in prior 6 months
<b>TRANSPORTATION</b>		
Transportation Services	(1) Delayed or didn't get med or soc svce because couldn't get transportation, OR (2) reported that s/he needed help or assistance with transportation in prior 6 months	No reported transportation service in prior 6 months

**Table 2. Measuring Needs & Service Gaps – Comparing NYC round 2 & 1**

Service	NYC Wave2 (2004-5, n=548)					NYC Wave1 (2002-4, n=693)			
	NEED		SERVICE GAP			NEED		SERVICE GAP	
	Number with Need	% of Full Cohort with Need	Among those with Need, # with Service Gap	Among those with Need, % of Service Gap	(Among entire cohort, % of Service Gap)	Number with Need	% of Full Cohort with Need	Among those with Need, # with Service Gap	Among those with Need, % with Service Gap
<b>HEALTH</b>									
<i>Comprehensive medical care</i>	548	<b>100%</b>	175	<b>32%</b>	<b>(32%)</b>	693	<b>100%</b>	169	<b>24%</b>
<i>Patient/ Provider communication</i>	548	<b>100%</b>	181	<b>33%</b>	<b>(33%)</b>	693	<b>100%</b>	223	<b>32%</b>
<i>Treatment adherence</i>	409	<b>75%</b>	68	<b>17%</b>	<b>(12%)</b>	512	<b>74%</b>	97	<b>19%</b>
<i>Antiretroviral therapy</i>	115	<b>21%</b>	34	<b>30%</b>	<b>(6%)</b>	161	<b>23%</b>	39	<b>24%</b>
<b>CASE MANAGEMENT</b>									
<i>CM: Social work model</i>	395	<b>72%</b>	184	<b>47%</b>	<b>(34%)</b>	521	<b>75%</b>	219	<b>42%</b>
<i>CM: Counseling model</i>	279	<b>51%</b>	116	<b>42%</b>	<b>(21%)</b>	381	<b>55%</b>	154	<b>40%</b>
<b>HOUSING</b>									
<i>Financial Housing Services</i>	126	<b>23%</b>	47	<b>37%</b>	<b>(9%)</b>	174	<b>25%</b>	58	<b>33%</b>
<i>Permanent Housing Services</i>	115	<b>21%</b>	46	<b>40%</b>	<b>(8%)</b>	156	<b>23%</b>	68	<b>44%</b>
<b>MENTAL HEALTH</b>									
<i>Professional Mental Health</i>	177	<b>32%</b>	98	<b>55%</b>	<b>(18%)</b>	248	<b>36%</b>	157	<b>63%</b>
<i>Supportive Mental Health</i>	79	<b>14%</b>	37	<b>47%</b>	<b>(7%)</b>	102	<b>15%</b>	39	<b>38%</b>
<b>ALCOHOL OR DRUGS</b>									
<i>AOD</i>	406	<b>74%</b>	278	<b>69%</b>	<b>(51%)</b>	479	<b>69%</b>	333	<b>70%</b>
<b>TRANSPORTATION</b>									
<i>Transportation Services</i>	90	<b>16%</b>	69	<b>78%</b>	<b>(13%)</b>	151	<b>22%</b>	115	<b>78%</b>

\* p &lt; .05      \*\* p &lt; .01      \*\*\* p &lt; .001

Note: see Table 1 for definitions of service

**Table 3. Sub-group differences in Case Management Service Gaps (row percentages)**

(Denominator of those with Comp Care CM Need / Counseling CM Need)	Comprehensive Care CM		Counseling CM	
	Among those with Need, the Proportion WITH a Service Gap	Among those with Need, the Proportion WITHOUT a Service Gap	Among those with Need, the Proportion WITH a Service Gap	Among those with Need, the Proportion WITHOUT a Service Gap
<b>Gender</b>				
Women (n=178 / 119)	51%	49%	44%	56%
Men (n=217 / 160)	43%	57%	40%	60%
<b>Race/Ethnicity</b>				
White (n=40 / 26) <sup>1</sup>	58%	42%	42%	58%
Black (n=205 / 132)	44%	56%	42%	58%
Latino (n=144 / 116)	46%	54%	41%	59%
<b>Age</b>				
20-34 year olds (n=25 / 25) <sup>1</sup>	44%	56%	36%	64%
35-49 year olds (n=233 / 174)	44%	56%	41%	59%
50+ year olds (n=137 / 80)	52%	48%	45%	55%
<b>Borough</b> * (P=0.04)				
Bronx (n=96 / 73)	43%	57%	34%	66%
Brooklyn (n=116 / 80)	46%	54%	41%	59%
Manhattan (n=110 / 80)	56%	44%	49%	51%
Queens (n=57 / 33)	44%	56%	49%	52%
Staten Island (n=16 / 13) <sup>1</sup>	18%	81%	23%	77%
<b>HIV Risk</b>				
White MSM (n=20 / 12) <sup>1</sup>	55%	45%	33%	67%
MSM of Color (n=87 / 69)	46%	54%	32%	68%
Prob Drug Use (n= 164 / 124)	52%	48%	42%	58%
Heterosexual (n=124 / 74)	39%	61%	37%	63%

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

Note: To illustrate, among 178 women with a need for comprehensive care case management service, 51% reported a service gap. Among 119 women with a need for counseling case management service, 44% reported a service gap.

<sup>1</sup> Caution should be used in interpreting proportions with denominators under 50

**Table 4. Co-Occurring Service Gaps - NYC CHAIN Cohort II (2004-2005)**

Service	Comprehensive Care CM Service	
	Among those WITH a Gap (n=184), proportion who also have a ...	Among those WITHOUT a Gap (n=211), proportion who also have a ...
<i>Comprehensive medical care gap</i>	43%**	28%
<i>Patient/provider communication gap</i>	38%	37%
<i>Antiretroviral treatment gap</i>	22%	15%
<i>Treatment adherence gap</i>	39%	26%
<i>Professional mental health service gap</i>	59%	31%
<i>Supportive mental health service gap</i>	66%***	30%
<i>Financial housing service gap</i>	58%	53%
<i>Permanent housing service gap</i>	56%	39%
<i>AOD treatment gap</i>	61%	71%
<i>Transportation gap</i>	86%	77%

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

**Table 5. Measuring Needs & Service Gaps – Subgroup Differences\***

<b>Service</b>	<b>NEED</b>	<b>SERVICE GAP</b>
	<b>Groups significantly more likely to experience a need</b>	<b>Groups significantly more likely to experience a service gap</b>
<b>HEALTH</b>		
<i>Comprehensive medical care</i>		- Manhattan residents
<i>Patient/Provider communication</i>		- Latinos - MSM - Queens residents
<i>Treatment adherence</i>	- Staten Island residents	
<i>Antiretroviral therapy</i>	- Men - Latinos	
<b>CASE MANAGEMENT</b>		
<i>CM: Social work model</i>	- Men	- Manhattan residents
<i>CM: Counseling model</i>	- Latinos - MSM who were problem drug users - Problem drug users	- Problem drug users
<b>HOUSING</b>		
<i>Financial Housing Services</i>		
<i>Permanent Housing Services</i>	- Blacks or Latinos - Queens or Brooklyn residents	
<b>MENTAL HEALTH</b>		
<i>Professional Mental Health</i>	- Women - Latinos	- White or Black
<i>Supportive Mental Health</i>	- MSM	
<b>ALCOHOL OR DRUGS</b>		
<i>AOD</i>	- Men - MSM who were problem drug users	- MSM or heterosexual
<b>TRANSPORTATION</b>		
<i>Transportation Services</i>	- Women - Black - Problem drug users - Bronx or Queens residents	

\* Note: These data represent statistical tests for subgroup differences by gender, race/ethnicity, HIV risk behavior, and borough ( $p$ -value $<0.1$ ). "Problem drug users" are defined as individuals who have used cocaine, crack, or heroin three or more times a week for a month or more, or who have ever injected drugs, or who meet the CAGE criteria for heavy drinking.

**Table 6. Medical Care Service Gaps Analyses**

Factor	Odds Ratio of Increased COMP MEDICAL CARE Service Gap	Odds Ratio of Increased MEDICAL COMMUNICATION Service Gap	Odds Ratio of Increased ARV TREATMT Service Gap	Odds Ratio of Increased TREAT ADHRNCE Service Gap
N=	548	548	112	409
Male (vs. Women)	0.94	1.13	0.64	<b>0.48*</b>
Black (vs. White)	1.48	0.88	1.12	0.82
Latino (vs. White)	1.10	1.19	1.06	0.53
Household income under \$10,000	1.17	1.10	0.94	0.59
Less than HS Education	1.12	0.84	2.10	1.15
20-34 years old (vs. 50+ years old)	<b>2.17+</b>	<b>3.69**</b>	1.66	2.53
35-49 years old (vs. 50+ years old)	1.40	0.88	0.90	1.44
Children under 18 in the household	0.95	1.01	1.42	<b>0.12**</b>
Unstable housing episode in past 6 months	1.03	0.90	0.97	0.90
Former drug user (vs. Never used drugs)	0.93	0.84	0.77	1.82
Current drug user (vs. Never used drugs)	1.35	1.23	1.29	<b>2.48*</b>
Bronx resident (Vs. Manhattan resident)	0.65	<b>1.83*</b>	0.93	0.51
Brooklyn resident (Vs. Manhattan resident)	<b>0.46**</b>	1.03	0.42	0.56
Queens resident (Vs. Manhattan resident)	0.72	1.55	0.59	0.91
Staten Island resident (Vs. Manhattan rsnt)	<b>0.19*</b>	1.36	na	0.44
Very low mental health score (<37.0 mcs)	1.15	1.20	1.80	1.06
200-499 t-cell count (vs. 500+ t-cell count)	1.40	0.71	na	0.80
<200 t-cell count (vs. 500+ t-cell count)	1.24	<b>1.45+</b>	na	0.69
Recent opportunistic infection	<b>0.68+</b>	1.10	0.62	<b>1.84*</b>
Delayed initial HIV medical care >3 months	1.10	1.00	1.59	0.75

+ p<.1      \* p < .05      \*\* p < .01      \*\*\* p < .001

Note: In those groups with a "reference group," such as male/female, one group is compared to the reference group. Men are .46 times as likely to report a treatment adherence service gap as are the reference group, women.

na -dropped due to collinearity or lack of variation

**Table 7. Case Management Service Gaps Analysis**

Factor	Odds Ratio of Increased COMPREHENSIVE CM Service Gap	Odds Ratio of Increased COUNSELING CM Service Gap
N=	395	279
<i>Male (vs. Women)</i>	<b>0.58*</b>	<b>0.61+</b>
<i>Black (vs. White)</i>	0.59	1.08
<i>Latino (vs. White)</i>	0.70	1.08
<i>Household income under \$10,000</i>	0.90	0.87
<i>Less than HS Education</i>	0.78	0.65
<i>20-34 years old (vs. 50+ years old)</i>	0.85	0.92
<i>35-49 years old (vs. 50+ years old)</i>	0.89	0.99
<i>Children under 18 in the household</i>	<b>0.50*</b>	<b>0.40*</b>
<i>Unstable housing episode in past 6 months</i>	0.90	0.73
<i>Former drug user (vs. Never used drugs)</i>	1.47	1.96
<i>Current drug user (vs. Never used drugs)</i>	1.24	1.80
<i>Bronx resident (Vs. Manhattan resident)</i>	0.61	0.56
<i>Brooklyn resident (Vs. Manhattan resident)</i>	0.70	0.72
<i>Queens resident (Vs. Manhattan resident)</i>	0.66	1.19
<i>Staten Island resident (Vs. Manhattan rsnt)</i>	<b>0.23*</b>	0.32
<i>Very low mental health score (&lt;37.0 mcs)</i>	1.15	0.96
<i>200-499 t-cell count (vs. 500+ t-cell count)</i>	0.96	0.88
<i>&lt;200 t-cell count (vs. 500+ t-cell count)</i>	1.27	0.73
<i>Recent opportunistic infection</i>	<b>0.53**</b>	0.67
<i>Delayed initial HIV medical care &gt;3 months</i>	0.88	1.08

+ p&lt;.1

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

**Table 8. Housing Service Gaps Analysis**

Factor	Odds Ratio of Increased FINANCIAL HOUSING Service Gap	Odds Ratio of Increased PERMANENT HOUSING Service Gap
N=	126	111
Male (vs. Women)	0.63	0.89
Black (vs. White)	0.95	2.10
Latino (vs. White)	1.33	3.07
Household income under \$10,000	<b>2.62+</b>	<b>3.07+</b>
Less than HS Education	0.67	0.85
20-34 years old (vs. 50+ years old)	0.82	0.31
35-49 years old (vs. 50+ years old)	0.48	0.48
Children under 18 in the household	1.58	1.16
Unstable housing episode in past 6 months	0.93	<b>5.27***</b>
Former drug user (vs. Never used drugs)	0.78	1.94
Current drug user (vs. Never used drugs)	0.64	1.35
Bronx resident (Vs. Manhattan resident)	0.93	0.30
Brooklyn resident (Vs. Manhattan resident)	1.14	<b>0.20+</b>
Queens resident (Vs. Manhattan resident)	1.30	0.80
Staten Island resident (Vs. Manhattan rsnt)	1.16	na
Very low mental health score (<37.0 mcs)	1.43	2.34
200-499 t-cell count (vs. 500+ t-cell count)	<b>0.19*</b>	<b>0.14*</b>
<200 t-cell count (vs. 500+ t-cell count)	0.79	0.66
Recent opportunistic infection	<b>0.37*</b>	0.73
Delayed initial HIV medical care >3 months	1.06	0.41

+ p&lt;.1

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

na -dropped due to collinearity or lack of variation

**Table 9. Mental Health Service Gaps Analysis**

Factor	Odds Ratio of Increased PROFESSIONAL MENTAL HEALTH Service Gap	Odds Ratio of Increased SUPPORTIVE MENTAL HEALTH Service Gap
N=	177	77
Male (vs. Women)	1.30	1.26
Black (vs. White)	1.12	2.65
Latino (vs. White)	0.35	<b>5.92+</b>
Household income under \$10,000	0.68	0.76
Less than HS Education	<b>2.10*</b>	0.70
20-34 years old (vs. 50+ years old)	1.64	na
35-49 years old (vs. 50+ years old)	1.29	0.66
Children under 18 in the household	0.49	1.38
Unstable housing episode in past 6 months	1.61	0.83
Former drug user (vs. Never used drugs)	0.73	0.67
Current drug user (vs. Never used drugs)	0.82	0.61
Bronx resident (Vs. Manhattan resident)	1.27	1.51
Brooklyn resident (Vs. Manhattan resident)	1.02	0.31
Queens resident (Vs. Manhattan resident)	1.33	0.74
Staten Island resident (Vs. Manhattan rsnt)	0.35	na
Very low mental health score (<37.0 mcs)	na	na
200-499 t-cell count (vs. 500+ t-cell count)	<b>2.17+</b>	0.28
<200 t-cell count (vs. 500+ t-cell count)	<b>2.43*</b>	1.11
Recent opportunistic infection	1.21	0.83
Delayed initial HIV medical care >3 months	1.19	0.34

+ p&lt;.1

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

na -dropped due to collinearity or lack of variation

**Table 10. AOD & Transportation Service Gaps Analysis**

Factor	Odds Ratio of Increased AOD Service Gap	Odds Ratio of Increased TRANSPORTATION Service Gap
N=	405	88
Male (vs. Women)	0.94	0.28
Black (vs. White)	1.23	0.27
Latino (vs. White)	1.41	0.33
Household income under \$10,000	0.76	<b>28.0**</b>
Less than HS Education	1.21	0.88
20-34 years old (vs. 50+ years old)	1.16	0.56
35-49 years old (vs. 50+ years old)	1.26	0.58
Children under 18 in the household	0.63	1.40
Unstable housing episode in past 6 months	1.14	2.70
Former drug user (vs. Never used drugs)	<b>0.04***</b>	0.23
Current drug user (vs. Never used drugs)	<b>0.03***</b>	0.50
Bronx resident (Vs. Manhattan resident)	0.86	0.32
Brooklyn resident (Vs. Manhattan resident)	0.83	0.21
Queens resident (Vs. Manhattan resident)	1.31	0.17
Staten Island resident (Vs. Manhattan rsnt)	1.03	na
Very low mental health score (<37.0 mcs)	1.22	<b>5.45*</b>
200-499 t-cell count (vs. 500+ t-cell count)	<b>0.50*</b>	1.86
<200 t-cell count (vs. 500+ t-cell count)	<b>0.57*</b>	0.38
Recent opportunistic infection	0.92	1.60
Delayed initial HIV medical care >3 months	<b>0.60+</b>	1.32

+ p&lt;.1

\* p &lt; .05

\*\* p &lt; .01

\*\*\* p &lt; .001

na -dropped due to collinearity or lack of variation

**Table 11. Service Utilization - Comparing NYC round 2 & 1**

Service area	The second round (2004-5, N=548)		The first round (2002-4, N=693)	
	# who received service	% of total who received service	# who received service	% of total who received service
<i>Ambulatory Medical Care</i>	532	97%	672	97%
<i>Inpatient Care</i>	116	21%	131	19%
<i>ER use</i>	184	34%	224	32%
<i>Case Management</i>	401	73%	510	74%
<i>Dental Care</i>	215	39%	290	42%
<i>Food Bank/Home delivered</i>	126	23%	na	na
<i>Home Health Care</i>	61	11%	64	9%
<i>Housing Services</i>	111	20%	172	25%
<i>Legal Services</i>	42	8%	56	8%
<i>Mental Health Services</i>	274	50%	393	57%
<i>Substance Use Services</i>	142	26%	167	24%
<i>Transportation Services</i>	22	4%	42	6%

**Notes**

Amb med care = any reported HIV primary medical care.

Inpatient care = any reported inpatient medical care

ER use = any reported ER use

Case management = any reported case management or case worker assistance.

Dental care = any reported dental service.

Home health care = refers to any reported professional assistance with activities of daily living.

Housing services (any) = refers to any placement or financial assistance services

Mental health services = refer to any professional (psychiatrist or therapist) or supportive (support group, peer) services

Substance use services = refer to any therapeutic or self-help drug treatment.

**Table 12. Attrition Analysis - Are Those “Lost to Follow-up” Different from Those Who Stayed? (NYC CHAIN)**

Service	NEED				SERVICE GAP			
	Interviewed in Wave 2		Not interviewed in Wave 2		Interviewed in Wave 2		Not interviewed in Wave 2	
	Number with need in Wave 1	Proportion with Need in Wave 1	Number with Need in Wave 1	Proportion with Need in Wave 1	Among those with Need, the Number with a Service Gap in W1	Proportion of those with Need Experiencing Service Gap in W1	Among those with Need, the Number with a Service Gap in W1	Proportion of those with Need Experiencing Service Gap in W1
<b>HEALTH</b>								
<i>Comprehensive medical care</i>	548	<b>100%</b>	145	<b>100%</b>	129	<b>24%</b>	40	<b>28%</b>
<i>Patient/ Provider communication</i>	548	<b>100%</b>	145	<b>100%</b>	172	<b>31%</b>	51	<b>35%</b>
<i>Treatment adherence</i>	413	<b>75%</b>	99	<b>68%†</b>	79	<b>19%</b>	18	<b>18%</b>
<i>Antiretroviral therapy</i>	123	<b>22%</b>	38	<b>26%</b>	28	<b>23%</b>	11	<b>29%</b>
<b>CASE MANAGEMENT</b>								
<i>CM: Comprehensive care model</i>	402	<b>73%</b>	119	<b>82%*</b>	169	<b>42%</b>	50	<b>42%</b>
<i>CM: Counseling model</i>	296	<b>54%</b>	85	<b>59%</b>	121	<b>41%</b>	33	<b>39%</b>
<b>HOUSING</b>								
<i>Financial Housing Services</i>	133	<b>24%</b>	41	<b>28%</b>	45	<b>34%</b>	13	<b>32%</b>
<i>Permanent Housing Services</i>	118	<b>22%</b>	38	<b>26%</b>	50	<b>42%</b>	18	<b>47%</b>
<b>MENTAL HEALTH</b>								
<i>Professional Mental Health</i>	190	<b>35%</b>	58	<b>40%</b>	108	<b>57%</b>	49	<b>84%***</b>
<i>Supportive Mental Health</i>	78	<b>14%</b>	24	<b>17%</b>	30	<b>38%</b>	9	<b>38%</b>
<b>ALCOHOL OR DRUGS</b>								
<i>AOD</i>	368	<b>67%</b>	111	<b>77%*</b>	258	<b>70%</b>	75	<b>68%</b>
<b>TRANSPORTATION</b>								
<i>Transportation Services</i>	110	<b>20%</b>	41	<b>28%*</b>	86	<b>79%</b>	29	<b>74%</b>

† p&lt;=.10

\* p&lt;=.05

\*\* p &lt;=.01

\*\*\* p&lt;=.001