

## **Briefing Memo on HIV Treatment using CHAIN data**

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**February 18, 2005**

In an article in the New York Times on February 16, 2005 (“HIV Strain Adds Urgency to Changes in City AIDS Program,” by Marc Santora and Lawrence Altman), NYCDOHMH Commissioner Frieden described his interest in collecting information about HIV treatment utilization and drug resistance patterns among all HIV-positive adults in New York City, in order to better inform public health surveillance and intervention efforts. Although Columbia University’s CHAIN Project does not collect population data, we do have relevant information from a sample of 693 HIV-positive adults who were recruited in to a longitudinal cohort in 2002-2004. This cohort is a reasonable representation of the estimated 40,000 HIV-positive New Yorkers in the public system of care. The cohort does not represent HIV-positive individuals who are seen exclusively by private physicians, who know their serostatus but are not currently engaged with medical or social services, or who do not yet know their serostatus. We have included a recent CHAIN report, “Baseline Summary of NYC II Cohort, Report 2004\_3,” which elaborates further upon the characteristics of the cohort. Since we are part way through follow-up interviews with the baseline cohort (277 of 693 with complete data) we are able to report some preliminary information on changes over time.

The questions that we identified in the news article include the following:

1. How many people are on treatment for HIV?
2. What treatment are they on?
3. Is the treatment appropriate?
4. How are they doing on treatment?
5. Are viral loads (VL) suppressed?
6. How many people have drug resistance to one or more classes of antiretroviral therapy?
7. Has that number and proportion increased in recent years?
8. Of those on treatment, how many remain on treatment a few months later?
9. Of those on treatment, how many return to school/work?
10. Of those on treatment, how many stop because of bad reactions?
11. Of those on treatment, how many die?

CHAIN data can respond to many, but not all, of those questions. In the absence of specific clinical and diagnostic information we cannot determine whether the type of HIV treatment received by respondents is appropriate. The CHAIN instrument is based upon client self-report, and does not collect information on drug resistance. The numbers of individuals who stopped treatment are too few (44 individuals) to report reasons for stopping, so we have elected instead to report the reasons that respondents have given for ever having stopped HIV treatment. Lastly, since we have not completed following-up with all respondents it is too premature to report on the numbers who have died. The following tables, though, do offer a portrait of how a sample of HIV-positive adult New Yorkers are doing on HIV treatment.

**Q1. How many people are on treatment for HIV?**

HIV Treatment	Wave1 (2002-04)	Wave2 (2004-05)
	N=693	N=277
<i>no HIV therapy</i>	24%	24%
<i>guidelines: first choice (HAART)</i>	43%	55%
<i>guidelines: second choice (HAART)</i>	20%	5%
<i>ART (not HAART)</i>	7%	7%
<i>not recommended/should be changed</i>	5%	6%
<i>contraindicated</i>	<1%	3%

Note: HAART is based on DHHS guidelines current at the date of interview

**Q2. What treatment are they on?**

HIV Treatment Regimen	Wave1 (2002-04)	Wave2 (2004-05)
	N=693	N=277
<i>None</i>	24%	24%
<i>PI-based</i>	40%	41%
<i>NNRTI-based</i>	23%	26%
<i>NRTI-based</i>	13%	9%

**Q4. How are they doing on treatment?**

***Treatment Success***

	Wave1=> Wave2	
	(N=273)	(100%)
<i>Failure</i>	52	18%
<i>Equivocal</i>	77	28%
<i>Success</i>	148	53%

Note: Treatment success is characterized by changes in self-report virologic and immunologic status. If respondents have maintained suppressed viral loads and CD4 counts that are stable or rising they are considered “treatment success,” if their viral loads have gone from suppressed to not suppressed, or their CD4 counts have decreased, they are considered “treatment failure,” and if virologic status has improved by CD4 counts have decreased we considered it to be “equivocal.”

***Success rate by treatment (row percentage)***

	(N=277)	Failure	Equivocal	Success
<i>no HIV therapy</i>	69	28%	42%	30%
<i>guidelines: first choice (HAART)</i>	127	14%	24%	61%
<i>guidelines: second choice (HAART)</i>	49	20%	18%	61%
<i>ART (not HAART)</i>	22	18%	27%	55%
<i>not recommended/should be changed</i>	10	10%	20%	70%

**Success rate by regimen (row percentage)**

	(N=277)	Failure	Equivocal	Success
<i>None</i>	69	28%	42%	30%
<i>PI-based</i>	115	20%	23%	57%
<i>NNRIT-based</i>	64	13%	27%	61%
<i>NRTI-based</i>	29	7%	17%	76%

**Suppressed viral load**

	Wave1 (2002-04)	Wave2 (2004-05)
	N=630	N=271
<i>viral load &lt; 400</i>	54%	55%
<i>viral load ≥ 400</i>	46%	45%

**Adherence to HIV medication among who takes at least one HIV medication**

	Wave1 (2002-04)	Wave2 (2004-05)
	N=512	N=203
<i>completely adherent</i>	71%	69%
<i>not completely adherent</i>	29%	31%

Note: Complete adherence based on clients reporting they take their HIV medications “exactly as prescribed, almost never missing a dose,” and also not reporting any missed doses in two days prior to the interview.

**Q8. How many remain on treatment?**

**Remaining on HAART from baseline to follow-up**

Wave1 (2002-04) => Wave2 (2004-05)	(N=277)	(100%)
<i>On HAART =&gt; Not on HAART</i>	44	16%
<i>Not on HAART =&gt; Not on HAART</i>	66	24%
<i>Not on HAART =&gt; On HAART</i>	35	13%
<i>On HAART =&gt; On HAART</i>	132	48%

Note: follow-up interviews generally occur 12-18 months after baseline interview

**Remaining adherent from baseline to follow-up**

Wave1 (2002-04) => Wave2 (2004-05)	(N=182)	(100%)
<i>Adhered =&gt; Not Adhered</i>	27	15%
<i>Not Adhered =&gt; Not Adhered</i>	27	15%
<i>Not Adhered =&gt; Adhered</i>	28	15%
<i>Adhered =&gt; Adhered</i>	100	55%

***Drug Holidays or Structured Treatment Interruptions in the past six months***

	Wave1 (2002-04)	Wave2 (2004-05)
	N=662	N=259
<i>Yes for having drug holiday</i>	24%	20%
<i>No for having drug holiday</i>	76%	80%

**Q10. Why are people not currently taking HIV medication? (multiple answers allowed)**

<i>Reasons</i>	Wave1 (2002-04)	Wave2 (2004-05)
	N=119	N=40
<i>MD advised not to take now</i>	32%	13%
<i>Experienced too many or bad side effects</i>	31%	35%
<i>CD4 too high</i>	27%	38%
<i>Never been offered by medical provider</i>	16%	5%
<i>I chose not to take medications when offered</i>	13%	13%
<i>Not effective</i>	7%	8%
<i>Too difficult to take as prescribed</i>	7%	10%
<i>Couldn't afford</i>	0%	0%
<i>Other reason</i>	7%	15%

Note: Reasons are based on client self-report.