

*Report 2006-3*



---

# HIV/AIDS and Aging: People over 50 Years Old

---

Gunjeong Lee

Columbia University  
Mailman School of Public Health  
In collaboration with Medical and Health Research  
Association of New York,  
the NYC Department of Health and Mental  
Hygiene, the Westchester Department of Health,  
and the NY Health & Human Services HIV  
Planning Council

---

**HRSA Contract H89 HA 0015-16**  
**First submitted February 21, 2007**  
**Final submitted June 4, 2007**  
**© 2006 The Trustees of Columbia University**

---

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

## **ACKNOWLEDGMENTS**

A Technical Review Team (TRT) provides oversight for the CHAIN Project. In addition to Peter Messeri, PhD, Angela Aidala, PhD, Gunjeong Lee, PhD, Dan Schluter, PhD, and Barbara Bennet of Columbia University's Mailman School of Public Health, TRT members include Mary Ann Chiasson, DrPH, MHRA (chair); Jan Park, JoAnn Hilger, Nina Rothschild, DrPH, Clarissa Silva, Lucia Torian, PhD, Daniel Weglein, MD, NYCDOHMH; Julie Lehane, PhD, Tom Petro Westchester County DOH, and Roberta Scheinmann, MHRA.

This research was supported by grant number H89 HA 0015-16 from the US Health Resources and Services Administration (HRSA), HIV/AIDS Bureau with the support of the HIV Health and Human Services Planning Council, through the New York City Department of Health and Mental Hygiene and the Medical and Health Research Association of New York City, Inc. Its contents are solely the responsibility of the researchers and do not necessarily represent the official views of the U.S. Health Resources and Services Administration, the City of New York, or the Medical and Health Research Association of New York.

## **INTRODUCTION**

The number of older adults has increased continuously among people living with HIV/AIDS, and previous studies show that the older adults with HIV/AIDS are different in many aspects of their lives, such as service needs and health status, from the younger group. Despite the significant number of older adults living with HIV/AIDS, there are not many studies about older adults with HIV/AIDS, especially to describe how the older group's health status and service needs have changed in recent years. A previous CHAIN report in 2002 based on an earlier interview cohort of 1998-99 indicated that the older group reported more chronic diseases and were in poorer physical health than the younger group. However, no significant differences were found in service use or self-reported barriers to service use or access to care. Since the CHAIN study has recruited an additional sample of 693 PLWHA during 2002 and 2003, it is meaningful to investigate whether the same differences and similarities among age groups are manifest in the current cohort.

## **KEY FINDINGS**

- Older PLWHA are better off financially than are the younger PLWHA, even though increasing age is associated with a shift in sources of income from regular job earnings to Social Security Disability Income (SSDI) and Social Security Income (SSI). Comparing the older CHAIN study participants interviewed in 2004-5 to the older CHAIN study participants in 1998-99, household incomes in the more recent cohort are higher but the proportion who report financial difficulty remains the same. Sources of income and financial support remain similar except that receipt of rental subsidies and food stamps increased by 14% and 20%, respectively.
- Significantly more people among the older group live alone than among the younger;

67% live by themselves and 60% do not have any live-in or non-live-in spouse or partner. The proportion “living alone” among older PLWHA interviewed in 2004-05 was 9% higher than among the older group interviewed in 1998-99. The older group among recent cohort scored higher on a measure of HIV/AIDS stigma than the younger. This may account for lower levels of disclosure of HIV status than among the younger group. Eighteen percent (18%) of the older group have not disclosed their HIV status to any family member or close friend, compared to 12% among the younger.

- Members of the older group among the current cohort are more likely to give reasons for HIV testing indicating more advanced stage of illness at diagnosis than younger members. This suggests lower levels of awareness of the HIV epidemic among both older adults and their medical providers. However, the percentage of PLWHA among the older group who delayed initial entry into medical care is significantly lower than among the younger suggesting better access to and engagement with care once diagnosed.
- Older PLWHA report higher rates of a wide spectrum of chronic conditions; 86% of the older group has one or more chronic disease conditions. Among the older group, 40% report hypertension, 30% arthritis or rheumatism, and 41% hepatitis. The percentage with diabetes (14%) is almost three times that found among the younger group (5%).
- There are no age gaps in health outcomes. The younger group has higher service needs and barriers than older group, but no age gaps are found in service use among those who need services in most service areas.
- Interestingly, scores on several standardized measures indicate that mental health status is significantly better among the older group than among the younger, regardless of HIV experiences or history, even though PLWHA have more mental health issues than the general population.
- Older members of the Tri-County cohort show similar high rates of co-occurring chronic disease, and health status. However, the older cohort in Tri-County has more financial needs to maintain their daily lives, such as rent, food, or clothing, than those of New York City. Fewer of the older Tri-County residents received food stamps or rental subsidies, while more older people have regular jobs in Tri-County than in New York City.
- More older cohort members in Tri-County have more close family members than do

those in New York City. The level of stigma of Tri-Country residents is not different from New York residents. But fewer Tri-Country cohort members have informational resources for HIV related service use and keep track of their medical records than the respondents in New York City. Older members of the Tri-County cohort report significantly higher rates of barriers experienced for both medical care and social services.

## **STUDY BACKGROUND**

According to the recent surveillance report from the Centers for Disease Control & Prevention (CDC, 2005), older adults, those age 50 and over, represent approximately 12% of people living with HIV/AIDS (PLWHA). This CDC report shows that from 2001-2005, the estimated number of HIV/AIDS cases increased in every older group (all over 50 years old, 50-54, 55-59, 60-64, 65 years and older group), compared to decreases in adolescent and middle aged groups (30-34, 35-39, 40-44). In addition to the increase of new AIDS cases among older age groups, the average age of persons living with HIV/AIDS has also increased, because the use of combination drug therapy has led to improved survival rates. If these trends continue, the proportion of older adults among total HIV/AIDS cases will continue to increase.

However, despite the significant number of older adults living with HIV/AIDS, these older persons have clearly been a lower priority than younger persons both in practice and research, even though older PLWHA have different issues in many areas, such as chronic health problems, risk behaviors, and the progression from HIV infection to AIDS. In order to provide appropriate and needed services and medical care, knowledge concerning older adults with HIV/AIDS is of crucial importance.

Previous studies on the aged with HIV/AIDS show that aging can have implications in

many different areas. Aging is related to comorbidity with other medical conditions for PLWHA (Skiest, et al., 1996; Neundorfer, et al., 2002). Previous studies show that older people experience symptoms earlier and progress to AIDS faster and die more quickly (CDC, 1998), and HIV treatment is less effective for older people than for younger people (Nicholas, 2002).

Lack of knowledge about HIV/AIDS among the old, lack of educational materials for the older have been indicated as barriers to prevent HIV/AIDS as well as to access services or treatments. Older adults confuse signs or symptoms of HIV disease with those of a chronic condition (Neundorfer et al., 2002) and they are the least knowledgeable about how HIV is or is not transmitted (National Institute of Aging, 2001). In addition, older adults tend to discount their own HIV risks and do not seek HIV testing until they experience signs or symptoms of the illness (Mack & Bland, 1999). Erroneous assumptions that older adults are not sexually active or older people are not involved in other risk activities have also been indicated as major obstacles to prevention and diagnostic efforts (Orel et al., 2004; Nichols et al., 2002, Genke, 2000). The absence of age-appropriate educational materials that adequately address attitudes, myths, and biases encountered by older adults is also an important factor in delaying diagnosis of HIV/AIDS (Orel et al., 2005).

Some studies also indicate fragile social networks and social isolation due to the stigma of HIV/AIDS as additional burdens on older people with HIV/AIDS. The peer group of older people are more fearful of contracting HIV through casual contact than are younger people. Stigma threatens ego strength and self-image, and fear of shame to family and friends can result in the individual isolating herself/himself from previous social networks (Shippy & Karpiak, 2005; Worth, 1990). The additional stress of guilt, shame, and fears of rejection in addition to

having HIV/AIDS is a big barrier to achieving their well-being in physical and mental health (Schrimshaw & Seigel, 2003).

Previous studies also find high rates of psychiatric distress or depression and psychological crises when people first learn of their diagnosis. PLWHA also report depression, stress and mental disorder due to lack of material and emotional resources, as well as their risk behaviors (Nicholas et al., 2002; Sherbourne et al., 2000).

A recent published study (Shippy & Karpiak, 2005) by the AIDS Community Research Initiative of America (ACRIA) with 160 older adults with HIV in New York City shows that 57% of the participants reported inadequate emotional support and 78% of the participants needed more instrumental support. According to Shippy and Karpiak, older people are more likely to depend on formal support networks, which overburden the health care system, since traditional informal social networks of these older adults are fragile or disconnected because of isolation and stigma.

Because of the long history of the HIV/AIDS epidemic in New York City, older PLWHA represent a much higher proportion of persons living with AIDS than in the rest of the country. According to New York City HIV/AIDS Surveillance Statistics in 2005, more than 30% (23.2% in the age group of 50-59, 7.4% in the age group of 60 or older) of PLWHA were 50 or older in New York City, compared to 10-15 % of AIDS cases in the US (NYC DOHMH, 2006). The 2002 CHAIN cohort, based on a representative cohort of persons living with HIV receiving Ryan White funded treatment in New York City, has 32% of 693 survey respondents with age over 50, which shows a very similar age distribution to that of New York City HIV/AIDS Surveillance Statistics.

Previous CHAIN reports based on the original cohort recruited in 1994 and the refresher cohort recruited in 1998 showed that those in the older group reported more chronic diseases and were in poorer physical health than the younger group, while no significant differences were found in service use or self-reported barriers to service use or access to care (Lee, 2002). This study will investigate whether previous findings are applied to the current cohort of 693 PLWH recruited during 2002 and 2003.

This report explores these questions:

- ' Is there any difference between the older group and the younger group in risk behavior and physical and mental health status?
- ' Does the older group have similar social relationships to the younger, and if different, what is the effect of social relationship on service use?
- ' Is there any difference between the two age groups in engagement in medical treatment, such as HAART use and adherence?
- ' Which service needs and gaps exist for the older people with HIV/AIDS?
- ' Is there any change between the older adults in the current study (in 2004-5) and the older adults in the earlier study (in 1998-9) in various areas?

## **METHODS**

Data for this study come from the second round of interviews with the 2002 New York City cohort (interviewed during 2004-2005) and the second round of the Tri-County cohort (interviewed during 2004-2005). For the historical comparison, the sixth round of interviews with the 1995 and 1998 New York City cohorts (interviewed during 1998-1999) were also included.

The 2002 NYC cohort was sampled and recruited following a protocol similar to that followed for the 1994 NYC cohort. Recruitment for the 2002 cohort was conducted between July 2002 and December 2003 at 34 randomly selected medical and social service agencies. A two-step process was used. A random sample of service providers was chosen, and with the assistance of agency staff, clients were randomly selected from agency rosters or through a sequential recruitment procedure. Baseline interviews were completed with 684 agency-recruited individuals and a small sample (n=9) of HIV-positive individuals unconnected to medical care contacted through outreach activities between August 2002 and March 2004. Table 1 compares the 2002 CHAIN cohort of 693 individuals with contemporaneous New York City HIV/AIDS epidemiology data and a duplicated count of Ryan White CARE Act-funded encounters.

**Table 1. Sample Representativeness by Race/Ethnicity and Gender, NYC HIV/AIDS Cases and CHAIN Cohort**

	NYC Persons Living with AIDS, as of 6/30/03 <sup>1</sup>		NYC Persons Living with HIV, as of 6/30/03 <sup>1</sup>		Ryan White CARE Act Encounters, 3/2001 - 2/2002 <sup>2</sup>		CHAIN 2002 Cohort 6/2002-6/2004	
	Female	Male	Female	Male	Female	Male	Female	Male <sup>3</sup>
<b>Total N</b>	<b>15,753</b> (28%)	<b>39,765</b> (72%)	<b>10,104</b> (35%)	<b>18,995</b> (65%)	<b>10,765</b> (39%)	<b>16,962</b> (61%)	<b>278</b> (40%)	<b>415</b> (60%)
<b>White</b>	11%	25%	8%	30%	9%	8%	6%	10%
<b>Black</b>	56%	40%	58%	36%	53%	53%	62%	47%
<b>Latino</b>	33%	32%	31%	30%	37%	37%	31%	41%
<b>Other</b>	1%	2%	3%	4%	2%	2%	<1% (1)	2%

<sup>1</sup> Source: Personal correspondence, HIV Epidemiology Program, Department of Health and Mental Hygiene, the City of New York

<sup>2</sup> Source: HIV CARE Services. Data represent a duplicated count of first time encounters with Ryan White CARE Services in FY11, March 2001 - February 2002.

<sup>3</sup> Seven transgender cases are included in male category.

Second round interviews, used for this study, conducted between March 2004 and

October 2005, were completed by 548 individuals or 89% of the 615 cohort members who were alive and still living in New York City.

For comparisons over time we also include data from earlier cohorts. The original 1994 cohort includes 648 HIV-positive individuals recruited from agency sites and 52 HIV-positive individuals unconnected to services at the time of interview. A refresher cohort of 268 was recruited in 1998-99 using the 1994 agency sample frame and 24 PLWH unconnected to care.

The Tri-County cohort was recruited using methods and protocols similar to those for the New York City cohort. Recruitment for the Tri-County cohort was conducted in 28 agencies in Westchester, Rockland and Putnam Counties. Baseline surveys were completed by 396 individuals between November 2001 and November 2002. Table 2 shows that compared to the gender and ethnic composition of surviving AIDS cases in Tri-County at the end of 2000, females were somewhat over represented, but ethnic composition within gender closely approximated the AIDS case data.

Table 2 compares the 2002 NYC CHAIN cohort of 693 individuals with NYC PLWHA from NYC HIV/AIDS annual Surveillance Statistics, along with 1995 and 1998 NYC CHAIN cohort and Tri-County cohort. Similar to the surveillance data, the CHAIN study, based on a representative cohort of persons living with HIV receiving Ryan White funded treatment in New York City, found that 31% of the most recently recruited cohort (in 2002-2004) were in the older group, age 50 or older. The age distribution of the 2002 NYC CHAIN cohort is very different from previous cohorts. The age group between 30-39 is smaller, and age group between 50-59 is increased by about 20%.

The current report uses data from the second round of Cohort 2002 interviews conducted

during 2004 and 2005 (n=508). The respondents were divided into two age groups: under 50 (**the younger**, n=339, 62%) and 50 or older (**the older**, N=209, 38%).

The results of analyses using data from interviews conducted in 1998-99 (which include individuals from both “cohort 1994” and “cohort 1998”) are included to allow comparisons between the different periods. Also to investigate regional differences, analyses of age differences among CHAIN study participants from the Tri County region (Westchester, Putnam, Rockland) are presented.

**Table 2. Sample Representativeness by Age, NYC HIV/AIDS Cases and CHAIN Cohort**

	NYC PLWHA, as of 12/31/2005 <sup>1</sup>		CHAIN 2002 Cohort 2002-2004		CHAIN 1995 Cohort 1994-1995		CHAIN 1998 Cohort 1998-1999		Tri-County Cohort 2001-2002	
<b>Total N</b>	<b>95,417</b>	<b>100%</b>	<b>693</b>	<b>100%</b>	<b>700</b>	<b>100%</b>	<b>268</b>	<b>100</b>	<b>398</b>	<b>100%</b>
<b>under 20</b>	2,439	2.5%	-	-	-	-	-	-	-	-
<b>20-29</b>	5,742	6.0%	17	2.5%	78	11.1%	31	11.6%	12	3.0%
<b>30-39</b>	20,312	21.3%	162	23.4%	313	44.7%	94	35.1%	98	24.6%
<b>40-49</b>	37,731	39.5%	296	42.7%	247	35.3%	107	39.9%	187	47.0%
<b>50-59</b>	22,170	23.2%	191	27.6%	51	7.3%	29	10.8%	85	21.4%
<b>60+</b>	7,023	7.4%	27	3.9%	11	1.6%	7	2.6%	16	4.0%

<sup>1</sup> Source: NYC HIV/AIDS Annual Surveillance Statistics 2005, Table 1.1 HIV Epidemiology Program, Department of Health and Mental Hygiene, the City of New York

## RESULTS

### I. General Description by Age Group: Socioeconomic Status and Living Situation, and Social Relationships

#### 1. Sociodemographic Characteristics (Table 3)

Thirty eight percent of respondents among recent NYC cohort interviewed in 2003 and

2004 are the older, compared to 18% of NYC previous cohort interviewed in 1998 and 1999. Female and Hispanic PLWHA are under-represented among older members of the CHAIN cohort interviewed in 2004-2005. Older and younger CHAIN participants are similar in their educational level and ancestry. Residence is significantly different by age group. Older participants are significantly more likely to live in Manhattan while the younger group is spread out over the five boroughs.

Demographic characteristics of older members of the most recent CHAIN cohort are similar to characteristics of older members of the original cohort interviewed in 1998-99. However, there were more Hispanics and males among the older group in the new cohort, and participants from the Bronx were relatively fewer among the new cohort, compared to the earlier cohort.

There are no significant age differences among Tri-County cohorts, except by gender. More women belong to the younger group (55%) than the older group (42%), while 45% of the younger group are men and 58% of the older are men.

## 2. Economic Status and Resources (Table 4)

Older PLWHA are better off financially than are younger PLWHA, even though increasing age is associated with a shift in sources of income from regular job earnings to Social Security Disability Income (SSDI) and Social Security Income (SSI). About one-third (30%) of older CHAIN participants receive SSDI and 54% are recipients of SSI, both about 10% higher than seen among the younger group. Both older and younger PLWHA rely heavily on food stamps (more than 80%) and rental subsidies (62%). The younger have more financial

difficulties paying for utilities, clothing and recreational activities. Both groups have similar rates of unemployment.

Comparing the older PLWHA interviewed in 2004-5 to the previous older cohort interviewed in 1998-99, household incomes are higher but the proportion who report financial difficulty remains the same. Sources of income and financial support remain similar except that receipt of rental subsidies and food stamps increased by 14% and 20% respectively. The Tri-County cohort interviewed in 2003 reported significantly greater financial difficulty, especially for rent, utilities and food. Fewer of the older Tri-County residents received food stamps or rental subsidies.

### 3. Living Situation and Household Characteristics (Table 5)

Significantly more people among the older group live alone than among the younger; 67% live by themselves and 60% do not have a live-in or non-live-in spouse or partner. The proportion “living alone” among older PLWHA interviewed in 2004-05 was 11% higher than among the older group interviewed in 1998-99.

PLWHA age 50+ are less likely to report recent experiences of homelessness than younger CHAIN participants, but differences are not statistically significant. However, the elderly among the recent cohort are more likely to be in unstable housing (10%) than their age peers interviewed in 1998-1999 (3%). The older group among the Tri-County cohort are more likely to be married or formerly married than NYC cohorts, but 54% of the younger group in Tri-County has never married, which is a similar rate to the NYC cohorts.

#### 4. Social Relationships (Table 6)

The older group interviewed in 2004-05 scored higher on a measure of HIV/AIDS stigma (data not shown). This may account for lower levels of disclosure of HIV status than among the younger group. Eighteen percent (18%) of the older group have not disclosed their HIV status to any family member or close friend, compared to 12% among the younger. Older PLWHA among the most recently interviewed cohort are more likely to report that they have no close friends (12%) than the older group interviewed in 1998-99 (3%). Almost half of the older group among Tri-County residents report they know no one who would be a good source of information about finding a dentist to care for persons with HIV, suggesting that they may have more limited sources of information for finding out about HIV related services than the older group in New York City.

The mean length of time since HIV diagnosis among persons currently age 50+ has increased by 5 years compared to time since diagnosis among the older cohort interviewed in 1998-99. The mean years since diagnosis for the older group interviewed in 2004-2005 is 11.5 years and the majority, 54%, were diagnosed more than 10 years ago. Among the earlier cohort, no one had been diagnosed for 10 years. This of course reflects the longer life expectancy of persons living with HIV/AIDS with the advent of antiretroviral medications.

**Table 3. Sociodemographic Characteristics**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
Mean age (SD)	46.8 (8.2)	41.8 (5.2)	55.1 (5.0)	54.8 (5.1)	54.2 (4.8)
<b>Gender</b>	**				*
Female	42%	47%	35%	47%	42%
Male	58%	53%	65%	53%	58%
<b>Ethnicity</b>	*				
White	9%	7%	12%	17%	17%
Black	52%	50%	56%	66%	59%
Latino	38%	42%	30%	16%	22%
Other	1%	1%	1%	1%	2%
<b>Education</b>					
High school or more	60%	59%	62%	59%	56%
Less than high school	40%	41%	38%	41%	44%
<b>Ancestry</b>					
US born	77%	75%	79%	80%	84%
Foreign born	23%	25%	21%	20%	16%
<b>Borough of Residence</b>	***			*	na
Bronx	24%	24%	17%	28%	
Brooklyn	30%	29%	32%	17%	
Manhattan	27%	21%	36%	38%	
Queens	14%	16%	10%	13%	
Staten Island	5%	5%	4%	4%	

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

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

**Table 4. Economic Status and Resources**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
<b>Household Income</b>	***				
\$7,500 or more	61%	56%	71%	51%	76%
Less than \$7,500	39%	44%	29%	49%	23%
<b>Poverty Level of Household</b>	***				
Above poverty line	51%	43%	64%	43%	61%
Under poverty line	49%	57%	36%	57%	39%
<b>Income Sources</b>					
Regular Job Earnings	20%*	22%	15%	19%*	32%
Social Security or Other Pension	6%*	5%	9%	9%*	8%
Social Security Disability Income (SSDI)	24%**	20%	30%	26%	28%
Social Security Income (SSI)	49%	46%	54%	54%	47%
Food Stamps	82%	83%	81%	61%	48%
Rental Subsidy	62%	62%	61%	47%*	37%
<b>Employment Status</b>				*	
Unemployed	84%	84%	83%	85%	71%
Working part time or irregular	12%	11%	13%	12%	14%
Employed full time	5%	5%	3%	3%	15%
<b>Fairly often/ very often, not enough money in the household for...</b>					
Rent	8%	9%	7%	4%	16%
Utilities	11%*	13%	7%	4%	18%
Food	12%*	14%	7%	9%	20%
Medical care	2%	2%	2%	1%	3%
Clothing	24%**	28%	17%	23%	44%
Recreational activities	35%*	39%	28%	22%	47%

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

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

**Table 5. Living Situation and Household Characteristics**

	NYC cohort II (2004-5)			NYC cohort I	Tri-County cohort
	All	Age 26-49	Age 50-76	Age 50-76 (1998-9)	Age 50-76 (2003)
<b>Sample (N=)</b>	<b>548</b>	<b>339 (62%)</b>	<b>209 (38%)</b>	<b>93 (18%)</b>	<b>93 (30%)</b>
<b>Household Composition</b>	***			*	
Live alone	53%	44%	67%	56%	49%
Live in Institution	2%	3%	1%	3%	4%
Partner, no kids	19%	22%	14%	11%	16%
Partner, with kids	4%	6%	2%	4%	8%
Single parent with kids	6%	8%	3%	4%	8%
Other adults, no partner	10%	11%	8%	13%	11%
Other adults, kids, no partner	5%	5%	4%	9%	4%
<b>Marital Status</b>	***			**	***
currently married	9%	10%	8%	9%	16%
formerly married	30%	22%	42%	43%	59%
never married	61%	68%	51%	48%	25%
<b>Partner Relationship</b>	**			**	
no partner	53%	48%	60%	62%	na
live in partner	23%	27%	16%	15%	
non live in partner	24%	25%	23%	23%	
<b>Living Situation <sup>1</sup></b>					
House/ apartment owned by self/family	4%	5%	3%	13%	5%
Private rental	29%	28%	31%	31%	49%
Subsidized rental	52%	50%	54%	44%	32%
Doubled up with others	4%	4%	4%	4%	4%
Temporary transitional housing	10%	12%	7%	11%	9%
Emergency housing	<1%	<1%	0%	1%	0%
Non housing	<1%	<1%	0%	0%	0%
<b>Housing Status past 6 months</b>					
Stable	82%	80%	85%	90%	95%
Unstable	9%	9%	10%	3%	4%
Homeless	9%	11%	5%	6%	1%

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

<sup>1</sup> Transitional housing includes SRO, welfare hotel, nursing home, hospice, or jail. Emergency housing includes shelter or drug treatment housing. Non housing includes street or other public space

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

**Table 6. Social Relationships**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	<b>548</b>	<b>339 (62%)</b>	<b>209 (38%)</b>	<b>93 (18%)</b>	<b>93 (30%)</b>
<b>HIV disclosure</b> Mean number of close friends or family who know HIV status (sd)	10.2 (12.0)	9.6 (10.8)	11.1 (13.8)	9.3 (10.1)	17.4 (20.0)
% of disclosed HIV status to no one	15%*	12%	18%	16%	16%
<b>Social Network</b> Mean number of close friends or family who can help or advise (sd)	10.5 (12.8)	9.8 (12.2)	11.5 (13.6)	11.4 (11.5)	17.9 (18.6)
% of no close friend or family	10%	8%	12%	3%	3%
<b>Is there anyone who could come to your aid if you had an accident in the home?</b>					
Yes	85%	87%	82%	96%	80%
No	15%	13%	18%	4%	20%
<b>Is there anyone who could you count on to take care of you if you continue to bed for several weeks?</b>					
Yes	81%	83%	77%	90%	70%
No	19%	17%	23%	10%	30%
<b>Is there anyone who would be a good source of information on finding a dentist who treats people with HIV?</b>					
Yes	70%	69%	70%	81%	51%
No	30%	31%	30%	19%	49%

\*p<.05    \*\*p<.01    \*\*\*p<.001

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

## **II. Health and HIV Status**

### 1. HIV Diagnosis and Entry into Medical Care (Table 7)

The older group among the current cohort is more likely than younger members to give reasons for HIV testing that indicate a more advanced stage of illness at diagnosis (“I had health problems that worried me” or “I was in the hospital for something else and was tested for HIV”). This suggests lower levels of awareness of the HIV epidemic among both older adults and their medical providers. However, the percentage of PLWHA among the older group who delayed initial entry into medical care is significantly lower than among the younger suggesting access to and engagement with care once diagnosed. There are no differences between age groups with regard to the first place they went for help after HIV diagnosis and how they found their first medical provider for HIV care.

### 2. Health Status (Table 8)

In general, HIV-related health outcomes are similar across age groups. However, the older PLWHA have better HIV-related health outcomes than the younger PLWHA, though the differences are not statistically significant. Thirty-eight percent of the older group have T-cell counts over 500, and 68% of them have undetectable viral loads, compared to 31% and 57%, respectively, of the younger group. Lifetime rates of opportunistic infections and the rate of AIDS diagnosis are similar for both age groups. The scores on a summary measure of physical health functioning (MOS-SF12 PCS) are lower among older PLWHA by 2.5 points. Since the older participants have better HIV-related health outcomes than the younger participants, the normal aging process would be the main reason for lower physical health functioning scores

among the older group.

T-cell counts and physical health status (PCS) among the new cohorts are better than NYC cohort I. Tri-County cohort shows no age differences in health status.

### 3. Chronic Disease Status (Table 9)

Older PLWHA report higher rates of a wide spectrum of chronic conditions; 86% of the older group has one or more chronic disease conditions, compared to 71% of the younger group. The rates for hypertension (40%), arthritis or rheumatism (30%), and hepatitis (41%) among the older group are also significantly higher than those of the younger group (25%, 22%, and 28% respectively). About a third of older respondents have asthma and 15% have heart problems, but very few respondents have kidney and cervical diseases.

The percentage with diabetes (14%) is almost three times that found among the younger group (5%), which raises the question of the possible link between diabetes and long term use of HIV medication, especially HAART. Since the CHAIN survey does not include the date when the respondents started taking HIV medication, we compared the years after HIV diagnosis for the group with diabetes and the group without diabetes. Since there is no difference in mean years of HIV diagnosis among the two groups, 11.0 years for the people without diabetes and 10.6 years for the people with diabetes, it is hard to claim the effect of HIV medication on developing diabetes in this study.

Older members of the Tri-County cohort show similar high rates of co-occurring chronic disease. However, the older group in Tri-County has significantly higher rates of each chronic disease than the younger group, including hypertension, heart problem, diabetes, arthritis or

rheumatism, and kidney disease. In particular, the percentage with hypertension (48%) is twice that of the younger group (24%). The rates of arthritis or rheumatism (43%) and breathing problems (38%) among Tri-County older group are much higher than those of the New York older group (30%, 20%, respectively), but the rate of hepatitis (21%) is about a half of the rate for the New York City older group (41%).

#### 4. Risk Behaviors and Mental Health (Table 10)

The older group shows very different patterns of risk behaviors, compared to younger PLWHA. In historical HIV risk categories, the older group was more engaged in IDU experience (56%) than the younger group (44%), while the rate of MSM (32%) is significantly higher for the younger group than for the older (24%). For current risk behaviors, the older were less likely to report current smoking, problem alcohol use or hard drug use than the younger group. The rates of substance use among the most recent cohort of older PLWHA is comparable to the older group interviewed in 1998-99.

Fewer people among the older group are sexually active (55% compared to 72%) and among the sexually active, fewer report unprotected sex in the six months prior to interview (10% compared to 19%). Older CHAIN participants interviewed in 1998-99 were more likely to report unsafe sex than the older among the current cohort. About half (45%) of the older group was not sexually active at all during the last six month period, which is 10% lower than the rate for the earlier cohort interviewed in 1998-99 (55%). The older group reports slightly more exchange of money or drugs for sex (11%) than the younger (8%), probably due to the fact that fewer older people have regular partners than the younger (see Table 5).

Interestingly, scores on several standardized measures indicate that mental health status is significantly better among the older group than among the younger. The mean mental health functioning component score (MOS-SF12 MCS) for the older group is 42.8, compared to 40.3 for the younger group, and the difference is statistically significant. The older group's Perceived Stress Scale (PSS) score (5.3) is better than that of the younger group (6.0), though both scores are higher than the U.S. population average (4.4).

There are not many studies comparing age groups in PLWHA and most other studies of HIV-positive persons age 50 or older focus on newly diagnosed older PLWHA. In a study by Meadow and colleagues (1998), the mental health issues of the older were found to be very consistent with those of the younger. Both groups have severe mental health problems, but the older was found to have significantly more brain disorders, whereas the younger group has significantly more panic disorder. A study by Nokes et al. (2000) also showed that older infected adults have not been found to be more depressed than younger adults with HIV/AIDS, though they are at significant risk for depression.

To better explain mental health status among the older cohort, we checked whether there is a link between MCS or PSS scores and the length of time since HIV diagnosis. MCS score for people who have been diagnosed with HIV/AIDS within 1 year is lower (39.3) than for others (41.2), but the difference is not statistically significant. This difference disappears when we compare the group with two years of HIV diagnosis to the rest. Therefore, it is hard to say that the length of HIV experience are not directly related to mental health status, especially after one year of HIV diagnosis.

We also explored the relationship between mental health and ethnicity, because the mean

score of MCS is lower and the mean of PSS is higher for Hispanic respondents than for Black or White respondents. Since 69% of the Hispanic participants are under 50 years old, while 59% of Black and 50% of White participants are younger, the poor scores of mental health indicators for younger Hispanic could be related to the older group's better mental health status.

To confirm that age is the significant factor in mental health status, regression analyses have been conducted for MCS and PSS scores with sex, ethnicity, HIV diagnosis year, educational level, and age. Only age and educational level are significantly related to mental health status (data not shown). Being older (50 or older) and educational level less than high school diploma are positively related to better mental health status. This finding shows that even though PLWHA have more mental health problems than the general population, regardless of their HIV history or experience, the younger PLWHA have more difficulties maintaining their mental health than do the older group .

**Table 7. HIV Diagnosis and Entry into Medical Care**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
<b>Years since HIV diagnoses</b>					
mean years	10.9 *	10.5	11.5	6.3	10.0
(sd)	(5.1)	(5.0)	(5.3)	(3.4)	(4.9)
1-5 years	17%	18%	16%	44%	19%
5-10 years	32%	34%	30%	42%	34%
11-15 years	33%	32%	34%	14%	34%
16-20 years	14%	13%	16%	0%	11%
20 or more years	3%	3%	5%	0%	1%
<b>HIV diagnosis</b>	*				
Before 1990	23%	21%	27%	25%	29%
1990-1995	42%	41%	43%	59%	41%
1996-2000	29%	29%	28%	16%	25%
2001 or after	7%	9%	2%	0%	5%
<b>HIV test because of sickness</b>	*				
Yes	28%	25%	35%	na	14%
No	72%	75%	65%		86%
<b>Delayed Entry into Medical Care<sup>1</sup></b>	*				
Yes	26%	30%	21%	25%	19%
No	74%	70%	79%	75%	81%
<b>First place to go for help after HIV dx</b>				*	
Nowhere	13%	12%	14%	17% <sup>2</sup>	na
Medical provider	63%	62%	65%	57%	
Mental health or drug treatment provider	6%	4%	9%	5%	
Social service provider	14%	17%	11%	15%	
Friend, family, or non professional	3%	4%	2%	7%	
<b>How to find first medical provider</b>					
On my own	54%	54%	54%	na	na
Referred by friend or family	10%	12%	8%		
Referred by medical provider	16%	16%	17%		
Referred by other	14%	14%	14%		
Was just taken there	6%	5%	7%		

\*p<.05    \*\*p<.01    \*\*\*p<.001

<sup>1</sup> First medical visit for HIV four or more months after diagnosis.

<sup>2</sup> Asked only of the original cohort (N=306), not to the refresher group.

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

**Table 8. Health Status**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
<b>Perceived General Health</b>					
Excellent/Very good/Good	67%	68%	65%	66%	54%
Fair/Poor	33%	32%	35%	34%	46%
<b>PCS (physical health component scale)</b>	**			***	
mean PCS score	44.0	44.9	42.4	39.2	39.5
(sd)	(11.0)	(10.8)	(11.1)	(11.6)	(12.4)
PCS<45 (low physical health score)	51%	49%	54%	69%	66%
<b>Tcell Count</b>					
200 or less	21%	22%	19%	26%	12%
201-499	44%	45%	42%	41%	42%
500 or more	34%	31%	38%	28%	29%
Don't know	2%	2%	1%	5%	17%
<b>Viral Load</b>					
bad / 10000 or more	20%	22%	16%	16%	12%
400-9999	19%	21%	16%	17%	31%
good / undetectable / 400 or less	61%	57%	68%	67%	57%
<b>AIDS diagnosis</b>					
Yes	66%	64%	69%	72%	70%
No	34%	36%	31%	28%	30%

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

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

**Table 9. Chronic Disease Status**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
<b>Asthma</b>	29%	28%	29%	na	21%
<b>Other Breathing Problems</b>	17%	16%	20%	na	38%
<b>Hypertension</b>	31%***	25%	40%	na	48%***
<b>Heart Problems</b>	11%*	9%	15%	na	20%**
<b>Diabetes</b>	8%***	5%	14%	na	19%*
<b>Arthritis or Rheumatism</b>	25%*	22%	30%	na	43%*
<b>Kidney Disease</b>	<1%	<1%	0%	na	6%*
<b>Hepatitis</b>	33%**	28%	41%	na	21%
<b>Active TB Infection</b>	3%	2%	4%	na	0%
<b>Cervical Disease (women only)</b>	3%*	5%	0%	na	5%
<b>One or more Chronic Disease</b>	77%***	71%	86%	na	83%*

\*p<.05    \*\*p<.01    \*\*\*p<.001

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

Table 10: Risk Behaviors and Mental Health

	NYC cohort II (2004-5)			NYC cohort I	Tri-County cohort
	All	Age 26-49	Age 50-76	Age 50-76 (1998-9)	Age 50-76 (2003)
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
<b>HIV risk group</b>	*				**
MSM	20%	23%	14%	15%	8%
IDU	39%	35%	46%	46%	57%
MSM & IDU	9%	9%	10%	10%	4%
Heterosexual or Other	32%	33%	30%	29%	31%
<b>Sexual Behavior (last 6 months)</b>	***			**	***
Sexually Active	65%	72%	55%	45%	43%
Sexually NOT Active	35%	28%	45%	55%	57%
<b>Among those who are sexually active</b>	(N=357)	(N=243)	(N=114)	(N=42)	(N=53)
Unsafe sex	16%*	19%	10%	48%	10%
Exchange sex with money or drug	9%	8%	11%	12%	5%
<b>Smoking</b>	61%***	67%	52%	56%*	59%
<b>Substance Abuse</b>					
- Current Problem Alcohol Use	12%	13%	9%	8%	9%
- Current Drug Use	21%*	24%	15%	12%	11%
Current problem alcohol or drug user	27%	32%	20%	18%	16%
<b>Mental Health Problem</b>	***				
Mean MCS score (sd)	41.2 (8.0)	40.2 (8.3)	42.8 (7.3)	45.7 (11.5)	41.1 (15.4)
% of MCS<42 (low)	50%	55%	44%	38%	57%
% of MCS<37 (low low )	30%	35%	22%	25%	41%
<b>Perceived Stress Scale (PSS)</b>					
Mean PSS score (sd)	5.7 (3.2)	6.0 (3.3)	5.3 (3.1)	na	na

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

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

### **III. Service Need, Use, and Barriers**

#### 1. Current Health Service Use (Table 11)

There are no significant differences by age group in use of health services; this also applies to Tri-County residents. On average, the older group has visited hospitals or clinics 5.6 times during the last six months and 30% of respondents have used an ER at least once during the last six months. Only one third of older respondents have used dental services during the last six months. Although the differences are not statistically significant, fewer of the older group used inpatient hospital services and dental services than did those of the younger group. Rates of health service utilization among the recently interviewed are comparable to rates among older CHAIN participants interviewed in 1998-99. The rates of dental service use and HAART use among Tri-County older respondents are higher than among current NYC older respondents by 19% and 11%, respectively.

#### 2. Service Needs and Gaps (Table 12-1, 2, and 3)

Self-reported needs for medical and social services were examined, as well as service gaps between reported need and service receipt. Younger PLWHA tend to report higher rates of service need in most areas. The differences among age groups are statistically significant in areas of social work and counseling, financial help for housing, professional mental health services, alcohol or drug treatments, and transportation services. In particular, 58% of the younger group needed case management services for counseling, compared to 37% of the older group.

There are no differences in service gaps for any of the areas of service need examined,

which implies that the younger people receive needed services as much as do the older. However, the rates of service gaps are very high in most service areas. More than half of respondents with service needs have not used any services in the areas of case management, housing, mental health, substance abuse treatment, and transportation. Seventy-four percent of the older people who need transportation services did not receive any needed services during the last six months.

There is almost no change in service need between the old cohort survey (in 1998-9) and the current cohort (in 2004-5), but the service gaps in health areas have decreased. Among the old cohort, 45% of the older have service gaps in comprehensive medical care, but 27% of the current older cohort do. However, the service gaps for case management and housing services increased by at least 10%. Especially noteworthy, service gaps for permanent housing increased from 5% of the old from the old cohort study (in 1998-9) to 54% of the current older cohort. This big change is found only among the older cohort, and a further study is needed to explain the reason. Service gaps for permanent housing of the older (5%) were significantly lower than the younger (25%) among the previous cohort, but those of the older (54%) were higher than the younger (37%) among the recent cohort.

In general, the Tri-County older cohort has higher service needs than the New York current older cohort. Most areas have similar rates of service gaps between the two older cohorts, but the Tri-County older cohort reports much higher rates of service gaps in patient/provider communication, treatment adherence, and mental health services. There are no age differences in either service need or service gaps among the Tri-County cohort.

### 3. Barriers to Service Use (Table 13)

We compared answers regarding a list of potential barriers to receiving medical care or social services and found no statistically significant differences by age for any possible barrier, even though the younger group has higher rates of barriers in most categories than the older. Summarizing across all categories, the young group were more likely to report one or more barriers than older CHAIN participants, and the rate differences are statistically significant. Almost twice as many of the younger group (21%) had at least one barrier to social service use compared with the older group (12%). Nineteen percent of the younger group report at least one barrier to medical service, while 12% of the older group do so. Among the older, the current older cohort reported fewer barriers to medical care than the older of the old cohort (in 1998-9), but barriers to social services are the same.

There are no significant differences in barriers to services between the younger and the older Tri-County cohort, but both the younger and the older group report significantly higher rates of barriers experienced for both medical care and social services than the New York cohort. About 40% of the Tri-County older cohort report barriers to receiving medical care and the same proportion indicate barriers to receiving social services, compared to 12% of the NYC older cohort. The indicated barriers are both in access and in provider attitude. Among access barriers, Tri-County participants report “don’t know where to go” and “transportation difficulties” at least five times more than the New York cohort. Among provider attitude barriers, “staff is not good at listening to your problem” and “staff is disrespectful, rude” are reported as barriers to both medical and social services.

**Table 11: Current Health Service Use**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76 (1998-9)	Tri-County cohort Age 50-76 (2003)
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	93 (18%)	93 (30%)
Outpatient visits last 6 months mean # of visit ( sd)	5.2 (7.0)	5.0 (6.4)	5.6 (8.1)	6.8 (7.9)	6.8 (8.8)
% no visit	5%	5%	5%	11%	4%
Inpatient at hospital last 6 months (1 or more night)	21%	23%	18%	19%	18%
ER use last 6 mos (1 or more time)	36%	30%	30%	30%	30%
Dental service use (1 or more time)	39%	41%	36%	35%	55%
HAART use last 6 mos	65%	63%	67%	63%	78%
ARV use last 6 mos	75%	73%	78%	84%	82%
No Medical Provider last 6 mos	(5)	(5)	(0)	(1)	(1)
No Insurance at any time during last 6 mos	(2)	(2)	(0)	(0)	(1)
<b>Continuity of care</b>					
Continuously use the same medical provider since the last interview (ave.12 months)	70%	69%	71%	69%	74%
Continuously engaged in appropriate medical care since the last interview (ave.12 months)	61%	60%	61%	65%	54%

\*p<.05    \*\*p<.01    \*\*\*p<.001

Table 12-1. NYC Cohort II (2004-5) - Service Need and Gaps

	Service Need			Service Gaps		
	N	Age 26-49	Age 50-76	N	Age 26-49	Age 50-76
<b>Sample (N=)</b>	548	339 (62%)	209 (38%)	548	339 (62%)	209 (38%)
<b>HEALTH</b>						
Comprehensive medical care	548	100%	100%	548	33%	27%
Patient/Provider communication	548	100%	100%	548	35%	31%
Treatment adherence	548	73%	78%	413	18%	14%
Antiretroviral therapy(Tcell<200)	548	22%	19%	34	30%	28%
<b>CASE MANAGEMENT</b>						
CM: Social work model	548	77%	67%*	402	44%	53%
CM: Counseling model	548	58%	37%***	273	40%	45%
<b>HOUSING</b>						
Financial Housing Services	548	27%	17%*	126	32%	50%
Permanent Housing Services	548	24%	19%	120	37%	54%
<b>MENTAL HEALTH</b>						
Professional Mental Health	548	35%	22%***	164	57%	51%
Supportive Mental Health	548	15%	14%	82	44%	47%
<b>ALCOHOL OR DRUGS</b>						
Alcohol or Drugs Treatment	548	78%	67%**	405	70%	66%
<b>TRANSPORTATION</b>						
Transportation Services	548	20%	11%**	70	80%	74%

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

Table 12-2. NYC Cohort I (1998-9) Service Need and Gaps

	Service Need			Service Gaps		
	N	Age 26-49	Age 50-76	N	Age 26-49	Age 50-76
<b>Sample (N=)</b>	508	415 (78%)	93 (18%)	508	415 (78%)	93 (18%)
<b>HEALTH</b>						
Comprehensive medical care	508	100%	100%	508	32%	45%*
Patient/Provider communication	508	100%	100%	508	33%	38%
Treatment adherence	508	76%	84%	394	29%	15%*
Antiretroviral therapy(Tcell<200)	508	22%	27%	115	24%	12%
<b>CASE MANAGEMENT</b>						
CM: Social work model	508	57%	60%	294	40%	43%
CM: Counseling model	508	54%	52%	271	40%	38%
<b>HOUSING</b>						
Financial Housing Services	508	11%	17%	60	42%	33%
Permanent Housing Services	508	32%	22%*	153	25%	5%*
<b>MENTAL HEALTH</b>						
Professional Mental Health	508	28%	25%	138	66%	61%
Supportive Mental Health	508	11%	16%	61	61%	47%
<b>ALCOHOL OR DRUGS</b>						
Alcohol or Drugs	508	65%	67%	333	62%	60%
<b>TRANSPORTATION</b>						
Transportation Services	508	11%	10%	50	55%	75%

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

Table 12-3. Tri-County cohort (2004-5) Service Need and Gaps

	Service Need			Service Gaps		
	N	Age 26-49	Age 50-76	N	Age 26-49	Age 50-76
<b>Sample (N=)</b>	315	222 (70%)	93 (30%)	315	222 (70%)	93 (30%)
<b>HEALTH</b>						
Comprehensive medical care	315	100%	100%	315	31%	23%
Patient/Provider communication	315	100%	100%	315	53%	53%
Treatment adherence	315	77%	83%	249	35%	32%
Antiretroviral therapy (among those with Tcell<200)	315	16%	12%	47	11%	18%
<b>CASE MANAGEMENT</b>						
CM: Social work model	315	86%	87%	272	46%	43%
CM: Counseling model	315	57%	55%	178	50%	49%
<b>HOUSING</b>						
Financial Housing Services	315	36%	26%	105	54%	50%
Permanent Housing Services	315	23%	23%	71	62%	48%
<b>MENTAL HEALTH</b>						
Professional Mental Health	315	39%	41%	125	70%	68%
Supportive Mental Health	315	19%	16%	35	60%	67%
<b>ALCOHOL OR DRUGS</b>						
Alcohol or Drugs	315	61%	58%	190	75%	65%
<b>TRANSPORTATION</b>						
Transportation Services	315	44%	44%	139	83%	83%

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

**Table 13: Barriers to Service Use**

	NYC cohort II (2004-5)			NYC cohort I Age 50-76	Tri-County cohort Age 50-76
	All	Age 26-49	Age 50-76		
<b>Sample (N=)</b>	548	339	209	93	93
<b>Barriers To Medical Care</b>					
<b>Access Barriers</b>					
don't know where to go	1%	1%	1%	2%	10%
transportation difficulties	6%	8%	4%	4%	23%
take too long to get an appointment	4%	5%	3%	5%	5%
cost too much/ not covered by insurance	3%	4%	2%	3%	6%
child care difficulties	1%	1%	<1%	0%	3%
nervous/afraid what medical provider might say	2%	2%	1%	5%	6%
staff do not speak your language	<1%	<1%	<1%	2%*	1%
<b>Provider Attitude Barriers</b>					
staff do not understand or was not competent with your problem	6%	7%	4%	9%	15%
staff is disrespectful, rude	7%	7%	6%	4%	12%
staff is not good at listening to your problem	5%	6%	4%	5%	12%
don't trust staff to respect confidentiality	1%	2%	<1%	2%	6%
Any Barrier to Medical Care	16% *	19%	12%	18%	39%
<b>Barriers To Social Service</b>					
<b>Access Barriers</b>					
don't know where to go	7%*	9%	4%	2%	26%
transportation difficulties	6%*	7%	3%	4%	26%
take too long to get an appointment	3%	3%	2%	0%	0%
cost too much/ not covered by insurance	2%	2%	1%	1%	3%
child care difficulties	1%	2%	<1%	0%	2%
nervous/afraid what service provider might say	2%	2%	2%	1%	10%
staff do not speak your language	2%	2%	3%	2%	2%
<b>Provider Attitude Barriers</b>					
staff did not understand or was not competent with your problem	11%	13%	8%	6%	2%
staff is not good at listening to your problem	7%	8%	6%	2%	25%
staff is disrespectful, rude	9%	10%	7%	4%	23%
don't trust staff to respect confidentiality	2%	3%	2%	0%	6%
Any Barrier to Social Service	18%**	21%	12%	12%	40%

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

For NYC cohort I and Tri-County cohort, the symbols of significant level express the differences between the aged group and the younger, even though the percentages of the younger groups are not included in the table.

## **DISCUSSION**

The number and the proportion of older adults living with HIV/AIDS has been growing and they may have different problems or needs than the younger group. This study explored whether there is any difference between the younger and the older in the area of sociodemographic characteristics, health status, and service use and need. This study also investigates whether there is any change in each area among the older PLWHA.

This study found that in most areas, the older group is similar to or better off than the younger group. However, the older group has reported more problems than the younger in two areas: chronic diseases and social isolation. The older PLWHA have significantly higher rates of hypertension, arthritis or rheumatism, hepatitis, and diabetes than the younger group. Most of the older PLWHA live alone and the rate of people living alone has increased in recent years. Also, the older participants have lower levels of HIV disclosure and limited immediate resources for social support. The younger have a greater need for financial resources, and are engaged in more risky behaviors, such as current drug use, smoking, and unsafe sex.

Compared to the previous cohort studied in 1998-9, the current cohort's general living situation has improved during recent years. The current older cohort's financial situation is better, mainly due to the income from rental subsidy and food stamps. Those over 50 years old have better HIV-related health status and mental health status, but physical health is worse for the older cohort, most likely due to the aging process. The lower mental health status of the younger group is partially explained by their ethnicity and their drug use and risky sexual behaviors, but age is still independently related to mental health status, after controlling for other factors.

This study supports most other studies' findings on older adults with HIV/AIDS. More

people among the older group postponed getting HIV tests until they were sick than the younger people, though they did not wait to get medical care. This confirms another study's finding that older adults do not seek HIV testing until they experience signs or symptoms of the illness (Mack & Bland, 1999). The stigma level for the older cohort measured by HIV disclosure rate has stayed the same between the previous and current cohorts, even though the length of time living with HIV or AIDS has greatly increased.

This study shows that the general living situation and health status of older PLWHA have improved in New York City, possibly because of both longer experience being HIV-positive and the development of HIV-care systems. However, the older group are more likely to delay getting HIV tests and still have higher levels of stigma than the younger group. Educational materials about HIV testing for older adults and training programs for service providers about older PLWHA are still needed.

## REFERENCES

- CDC, 2006, CDC HIV/AIDS Surveillance Report 2005, "Cases of HIV infection and AIDS in the United States and Dependent Areas"
- CDC, 1998, "AIDS among persons aged >50 years-United States, 1991-1996", *MMWR* 47(2) : 21-27
- Genke, J., 2000, "HIV/AIDS and Older Adults: The Invisible Ten Percent", *Care Management Journals*, 2000, 2: 196-205
- Lee, Gunjeong, 2002, "People over 50 years old with HIV/AIDS", CHAIN memo 2002-4, Columbia University
- Mack, K., & Bland, S., 1999, HIV testing behaviors and attitudes regarding HIV/AIDS of adults aged 50-64, *The Gerontologist*, 39: 687-694
- Meadow, J., le Marechal, K., & Catalan, J., 1998, "Mental health problems in older adults with HIV referred to a psychological medicine unit, *AIDS Care*, 10(suppl 2): S105-S112
- National Institute of Aging, 2001, *Older Americans and HIV Policy Facts*, Washington, DC
- Neundorfer, M. Harris, P., Britton, P., & Lynch, D., 1995, "HIV risk factors for Midlife and Older Women", *The Gerontologist*, 45 (5): 617-625
- Nichols, J., Speer, D., Watson, B., Watson, M., Vergon, T., Vallee, C., & Meah, J., 2002, *Aging with HIV-Psychological, Social, and Health Issues*, CA: Academic Press

- Nokes, K.M., Holzemer, W.L., Corless, I.B., Bakken, S., & Brown, M-A., 2000, Health related quality of life in persons younger and older than 50 who are living with HIV/AIDS, *Research on Aging*, 22: 290-310
- NYC Department of Health and Mental Hygiene, 2006, NYC HIV/AIDS Annual Surveillance Statistics 2005
- Orel, N., Spence, M., and Steele, J., 2005, "Getting the Message Out to Older Adults: Effective HIV Health and Education Risk Reduction Publications", *The Journal of Applied Gerontology*, 24 (5): 490
- Orel, N., Wright, J., CHES and Wagner, J., 2004, "Scarcity of HIV/AIDS risk-reduction materials targeting the need of older adults among state departments of public health", *The Gerontologist*, 44(5): 693-696
- Schrimshaw, E. & Seigal, K., 2003, *Perceived Barriers to Social Support from Family and Friends among older Adults with HIV/AIDS*, *Journal of Health Psychology*, 8: 738-752
- Sherbourne et al., 2000, "Impact of psychiatric conditions on health related quality of life in persons with HIV infection", *American Journal of Psychiatry*, 157: 248-54
- Shippy, A.A. & Karpiak, S., 2005, "Perceptions of Support among older adults with HIV", *Research on Aging*, 27 (3): 290-306
- Skiest, D.J., Rubinstein, E., Carley, N., Gioiella, L., & Lyons, R. 1996, "The importance of comorbidity in HIV-infected patients over 55: A retrospective case control study", *American Journal of Medicine*, 101:605-611

**Appendix 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