



Update Report #40

**PATHWAYS TO MENTAL
HEALTH CARE**

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C.H.A.I.N. Report

December 2001

ACKNOWLEDGMENTS

This research was made possible by grant number 5 H89 HA 0015-09 from the U.S. Health Resources and Services Administration (HRSA) under Title I of the Ryan White Comprehensive AIDS Resources Emergency Act of 1990, with the support of the HIV Health and Human Services Planning Council, through the New York City Department of Health and Medical and Health Research Association of New York City, Inc. It's contents are solely the responsibility of the Columbia University Joseph L. Mailman School of Public Health, and do not necessarily represent the views of the funders.

INTRODUCTION

The CHAIN Study has consistently shown significant mental health needs among persons living with HIV/AIDS (PLWH) in New York City. While rates have gone down in recent years, at each interview period since the study began in 1994, more than 40% of all CHAIN respondents scored “low” on a standardized mental health scale, a level that indicates clinically relevant symptoms.¹ Of these, barely half receive any mental health services at all, indicating considerable unmet need. PLWHs with “very low” mental health scores, whose mental health functioning is below the mean score seen in psychiatric inpatient populations, are no more likely to be receiving services. Approximately 30% of the sample have scores in the lowest range; consistently, throughout the course of the study period, barely half of these are receiving any mental health treatment or care. While not a diagnostic measure, scores in the very low range are consistent with psychiatric diagnosis and thus indicative of need for treatment by a mental health professional. Only about one-third of clients with the lowest mental health scores report even one visit to a psychiatrist, psychologist, or other mental health specialist in the six months prior to interview. Supportive counseling delivered by a range of providers, pastoral counseling, or participation in a support group are the other modalities of mental health services available to person living with HIV in New York (Aidala, et al 1996; Aidala et al, 1997; Aidala 2000).

Mental health problems, when untreated, have a number of negative impacts. They cause significant suffering and make it harder for people to function on a day-to-day basis, and manage their HIV disease. Mental health problems can also pose serious barriers to medical treatment access and adherence to treatment regimens. The goals of this report are to examine pathways into mental health care among CHAIN study participants. We will examine predictors of entry into mental health services among persons whose mental health scores indicate treatment need. We will also examine connections between mental health and other HIV services. We will examine the relationship between different systems of primary care in New York City and entry into mental health services, for example, comparing whose dominant medical provider over time is at a NYC public Health & Hospitals Corporation (HHC) hospital or clinic and individuals whose dominant medical provider over time is at a private, voluntary hospital facility or clinic or individuals who typically get their care at a neighborhood health center or at a drug treatment center. We will analyze patterns of service co-location as well as investigate patterns of direct referral into mental health services based on answers respondents give in response to questions about accessing mental health care.

MAJOR FINDINGS

- There is considerable unmet need for mental health services. At each interview period, barely half of individuals with low scores on the mental health measure are receiving any type of mental health services at all. Among individuals with the lowest scores, in the range typically seen among psychiatric inpatient populations, the proportion receiving treatment by a mental health professional has rarely exceed 40%.

¹ MOS-SF36 Mental Component Summary Score (Ware et al. 1994).

- Focusing on the more recent time period 1998 - 2000, following the same individuals overtime, the majority of those with low mental health scores report at least one visit with a mental health professional within 9 - 12 months of initial assessment.
- Self-perceived need for mental health treatment or services remains the single biggest predictor of accessing care among those with need for services indicated by low scores on the standardized measure. Case management is an independent predictor of entry into care.
- Medical providers are the most common source of direct referral for mental health services. However, having a medical provider, even a provider who meets standards of comprehensive primary care, is not predicative of entering mental health care among those whose scores indicate treatment need. Organizational setting of medical care (HHC, voluntary hospital, etc) is not associated with differential access to mental health services.
- There is considerable co-location of mental health services within case management and medical provider organizations. Mental health services are increasingly found within drug treatment and housing service agencies.
- Case management appears to be the most important entry point for accessing mental health services for the broad numbers of person with mental health needs, and they provide the bulk of supportive mental health care. This points to the importance of strengthening the screening, assessment and referral process to facilitate more timely entry into mental services for individuals in need of care who do not recognize or hesitate to admit need.

BACKGROUND AND METHODOLOGY

A. The CHAIN Survey and Data

The analysis of pathways into mental health care will be examined through an analysis of aggregate data from a representative sample of HIV-infected individuals in New York City. The data were collected as part of the CHAIN Project, an ongoing longitudinal study funded since 1994 by the City's Title I Health and Human Services Planning Council (the Planning Council). The CHAIN Project tracks individuals' encounters with both medical care and ancillary services and links patterns of service delivery to a wealth of information on individual characteristics and health outcomes. The CHAIN Project has interviewed HIV-infected individuals in the cohort every 6-12 months since 1994, and data for this study are current as of 1999-2000. Close to 1000 individuals have been interviewed as part of the CHAIN project.

The CHAIN Project followed a recruitment procedure designed to yield a broadly representative sample of people living with HIV in New York City. Study recruitment was conducted in 43 agencies which were selected so that there would be roughly an equal number of medical care and social service sites represented, as well as representation both from sites that were Title I grant recipients, and sites which were not. At 30 sites, staff contacted a random sample of clients. A sequential enrollment procedure was implemented at the remaining 13 agencies. All eligible clients present on a small number of recruitment days were invited by agency providers and CHAIN staff

to participate in the CHAIN study. A total of 648 individuals recruited from participating agencies completed baseline interviews. The agency-based sample was supplemented with 50 interviews conducted with HIV+ individuals with little or no connection to medical and social services. These individuals were contacted at outreach sites and through nominations from CHAIN participants. More detailed information on sampling strategy and recruitment may be obtained upon request from MHRA (CHAIN Technical Report #1, 1995).

Subsequent interviews were conducted at approximately six to twelve month intervals. Round two interviews were completed with 568 participants, 92% of the cohort still alive and not known to have moved outside of New York City. Round three interviews were conducted with 480 of CHAIN participants, 88% of the cohort who were alive and still residing in New York City. Round four interviews were conducted with 420 CHAIN participants or 82% of the surviving cohort. In an effort to replenish the CHAIN sample which had lost a number of participants to death and other factors, in 1998 an additional 267 individuals were added to the study, using the same agency and community sources. These individuals constituted the ‘refresher’ sample and joined the 385 CHAIN continuing participants who have been involved in the project since its inception in 1994, bringing the total number of people interviewed in round five to 652. In round six 508 participants, and in round seven 444 participants were interviewed representing 80% of those eligible at each interview period (not known to be deceased or moved out of the NYC area).

All CHAIN interviews are conducted in person by interviewers recruited from communities throughout New York City and trained specifically for the study. Interviewers are matched to respondents as much as possible with regard to gender and race/ethnicity. Approximately one-third of the field staff are themselves HIV positive. Interview topics include sociodemographic characteristics, the full range of experiences with access and use of medical and social services, and quality of life.

The CHAIN data can be considered a fairly representative sample of the total population of persons living with HIV in New York City. Thus, generalizations can be made from the patterns seen in the data at hand to the broader population. However, the analyses of pathways into mental health services is limited by the fact that detail about different mental health service models is not available in the CHAIN data set. We can examine characteristics of agencies where respondents receive mental health care, patterns of co-location of mental health and primary care or other types of services, and type of mental health services received within broad classifications of “professional” therapy, supportive counseling, pastoral counseling, and participation in a support group. Clients interviewed seldom were aware of licences or certifications of persons from whom they received mental health services so issues of licensure and training cannot be considered here.

Note that we will use a number of analytical approaches to answer the questions posed about patterns of service utilization and entry into mental health care. We begin by using the entire CHAIN sample, comparing study participants with low mental health scores on a standardized instrument (see discussion of measures below) to others at a higher level of functioning. We will examine cross-sectional prevalence estimates of service utilization among persons with low mental health scores at each interview period. For other analyses we focus on subsets of respondents - e.g. those with very low mental health scores, or those who have recently used mental health services.

To examine predictors of entry into mental health services among persons with low mental health scores, we used the entire over-time CHAIN data set. Each interview completed with each CHAIN study participant constituted an opportunity to observe the relationship between that person’s current mental health functioning and his or her connection (or lack of connection) to mental health services. Considering 968 individuals who were interviewed up to seven times each, we have close to 4000 observation points, approximately 30% of which represented interviews that were completed with PLWHs who were experiencing clinically relevant mental health symptoms at the time, as measured by a standardized instrument. The availability of follow-up data allows us to trace individuals’ entry (or non-entry) into mental health care and some outcomes of their service use.

These analyses based on all interviewed respondents with mental health needs who report receiving services cannot tell us whether the same individuals continue to need and/or use services, or whether different individuals move in and out of care. We will also examine mental health service utilization among the reinterviewed cohort, focusing on the subsample of CHAIN study participants who were interviewed at Time 5 , Time 6, and at Time 7 (1998 - 2000). This will allow us to trace changes in mental health need and service utilization among the same individuals.

Table 1. C.H.A.I.N. STUDY PARTICIPANTS COMPARED TO NYC AIDS CASES

	AIDS Cases, NYC¹	CHAIN: Wave 5	CHAIN: Wave 7
	1998	1998	2000
n	(40,014)	(652)	(444)
MALE	(29,900)	(376)	(238)
<i>Non-Hispanic White</i>	28%	19%	19%
<i>Non-Hispanic Black</i>	38%	54%	54%
<i>Hispanic</i>	33%	26%	27%
<i>Other</i>	1%	2%	1%
FEMALE	(10,114)	(276)	(206)
<i>Non-Hispanic White</i>	12%	5%	5%
<i>Non-Hispanic Black</i>	53%	64%	66%
<i>Hispanic</i>	34%	30%	29%
<i>Other</i>	1%	1%	1%

1 Source: NYC DOH Office of AIDS Surveillance

B. Measures

Measuring Mental Health

A standardized measure based on the MOS-SF36, Medical Outcomes Survey, is used to measure current mental health functioning and, thus, need for mental health services. A series of subscales are combined into the “mental component summary score” (MCS) which is a measure of general mental health functioning. The subscales measure:

- symptoms of depression and anxiety
- impaired role functioning : work, daily responsibilities
- impaired social functioning : social activities, relationships
- low energy or listlessness

Research has shown that the MCS distinguishes groups differing in the presence and severity of psychiatric disorder. A cut point of 42.0 (referred to as “low mental health”) on the summary score indicates current, clinically relevant psychiatric symptoms. A cut point of 37.0 (“very low mental health”) is consistent with psychiatric diagnosis and is the mean score seen in psychiatric inpatient populations (Ware et al. 1994).

In addition, we asked a series of direct questions, asking if the client had experienced “emotional or psychological difficulties including relationship problems” or need for mental health services in the six months prior to interview. We use this as a measure of self-perceived need for mental health services. Prior analyses have shown that client perception of service need is an independent predictor of service utilization (Aidala et al, 1996; 1997).

Measuring Mental Health Service Utilization

At each interview, respondents were asked if in prior six months, they had received any psychological counseling or therapy including talking to a pastor or other religious counselor, or attended a support group (excluding groups focused on substance abuse issues such as AA or NA). Services were further recorded as number of visits with a provider described as a psychiatrist, psychologist, therapist or other “mental health care professional;” number of visits for counseling from a social worker or case manager; visits to a clergy or other religious counselor; and number of sessions participating in a self-help or support group oriented to psychological and emotional needs of persons living with HIV/AIDS as distinct from groups such as AA or NA oriented toward substance abuse problems.

Utilization of these services is based upon client report. Note that the specific mental health training and licensure of providers is seldom known to respondents. It is likely that many persons described as “social worker or case manager” are CSWs and thus professional mental health providers. Methodological checks indicated that in the vast majority of cases, respondents who describe a social worker/case manager as providing mental health services are referring to a different individual than a case manager whom they name as helping them obtain social services (entitlements, housing, etc.). We are also unable to distinguish between professionally facilitated and peer led support groups.

Measuring Primary Medical Care Agency Pathways

In the attempt to understand the relationship between systems of medical care and access to mental health services, individuals were classified as to their primary medical care agency pathway (see Abramson et al. 2001). In order to construct the pathway variable, two main steps were taken. First, a new variable was created, consisting of eight possible points of observation, which represented an individual's entry point into HIV care and the medical care providers he visited over his follow-up period, up to seven years. The first observation point referred to the first doctor an individual reported seeing after his HIV-positive diagnosis ("Who was the first doctor or medical provider you went to for your HIV infection?"). We classified medical care and social service agencies based on organizational measures (e.g., organizational type, government type, etc.). "Provider types" were classified as None, the respondent did not see a doctor; HHC; voluntary hospital; CHC/clinic; drug treatment/social service; and private physician. Observation points 2-8 indicated the doctor whom an individual reported as his or her "current medical provider" for interview waves 1-7, respectively. A current medical care provider is defined as "a medical person whom you feel is or was at some time in charge of your overall HIV condition."

For example, the medical care pathway variable for an original cohort member may have been coded as "HHC" based on the fact that the first doctor he visited after an HIV-positive diagnosis, as well as his current medical care provider in Waves 1-7, was of the HHC provider type. This individual may have changed individual physicians, and may even have changed hospitals, but across all waves he has received medical care at an HHC facility. For all refresher cohort members, the pathway variable included only the first observation point information about providers at Waves 5-7. Note that due to small sample size, and the similarities in clientele, the CHC/clinic and drug treatment/social categories were ultimately merged.

We defined an individual's medical care path at each interview wave based on the history of medical care providers and which one predominated. The number of times a subject reported the same provider type as well as the number of valid observations was calculated. A "predominance ratio" measure was then calculated by dividing the count of the same provider type by the number of valid observations. Because most subjects reported utilizing more than one provider type, the following decision rules were applied to both original and refresher cohort members. If the predominance ratio was two-thirds (66%) or more, then this provider type was considered to be the dominant pathway. If a subject could not be assigned a pathway, as they did not report one provider type for at least two-thirds of their observations, then they were considered to be a "mover." Thus, a "pathway" variable was created that took one of six values: 0 = no current medical provider pathway; 1 = HHC pathway; 2 = voluntary hospital pathway; 3 = CHC/clinic/drug treatment pathway; 4 = private doctor pathway; 5 = "mover."

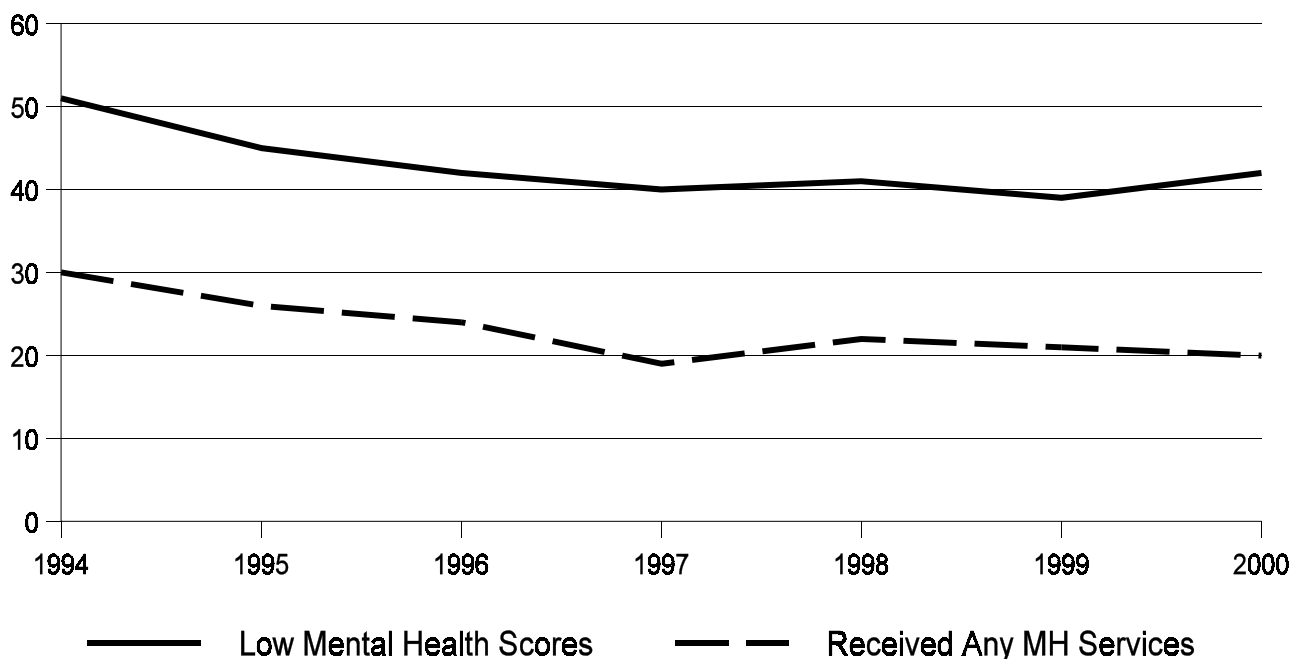
FINDINGS

A. Mental Health Needs and Service Utilization

Trends in Cross Sectional Analysis

Figure 1 shows the cross-sectional rates at each interview period of CHAIN study participants with low mental health scores (below 42.0) indicating clinically relevant psychiatric symptoms. Also shown is the proportion of those with low scores who reported any type of mental health care including one or more visits with a psychiatrist, psychologist, therapist or other mental health professional, supportive counseling from a social worker or a pastoral counselor, or participation in a support group oriented to emotional and psychological needs of persons living with HIV/AIDS. The percentage of PLWHs with low mental health scores has gone down from a high of 51% of all persons interviewed at Time 1 (1994) to approximately 40% in subsequent years. However, at each interview period, among persons whose scores indicate service need, barely half are receiving any treatment or care.

Fig 1. Trends in Mental Health Service Need and Service Utilization



The situation is not much improved for persons with the lowest level of mental health functioning (MOS scores <37.0), below the mean score seen among psychiatric inpatients. At each interview period, approximately 30% of the CHAIN sample have had mental health scores in this very low range. A slightly greater proportion of persons at this level of need are receiving some type of mental health services. Nonetheless, a consistent one-third to 40% are not receiving any treatment or care, including no supportive counseling or support group participation (data not shown).

Table 2 presents a more detailed breakdown of type of mental health services received among people with low mental health scores (< 42.0) at the most recent interview periods: Time 5, 6, & 7, approximately 1998 - 2000. Also shown for comparative purposes are rates of service use at Time 1 (1994 - 95) for clients with low scores at that time. At Time 1, slightly more than half of the people with low scores received some type of mental health services (54%). One-third (34%) had services that included one or more visits with a provider described as a psychiatrist, psychologist, therapist or other “mental health care professional,” and the same proportion (33%) had participated in a self-help or support group oriented to psychological and emotional needs of persons living with HIV/AIDS. One-quarter received counseling from a provider described as a “social worker or case manager”, and 5% visited clergy or a religious or spiritual counselor. Many persons used more than one type of provider. At baseline interview, almost half (46%) of those who scored low on the mental health measure were not receiving any mental health services at all -- not even low threshold support group participation.

Table 2. USE OF SERVICES AMONG CLIENTS WITH LOW MENTAL HEALTH SCORES

	Low Mental Health Score Time 1	Low Mental Health Score Time 5	Low Mental Health Score Time 6	Low Mental Health Score Time 7
Total Sample (n=)	(690)	(652)	(495)	(421)
Percent with Low Mental Health Scores	51%	41%	39%	42%
Among those with Low Mental Health (n=)	(352)	(257)	(190)	(175)
Mental health professional such as psychiatrist or psychologist	34%	37%	34%	35%
Case manager/social worker for mental health services	25%	9%	15%	11%
Clergy or religious counselor	5%	3%	2%	1%
HIV/AIDS support group	33%	28%	27%	19%
USE OF ANY MENTAL HEALTH SERVICES	54%	53%	53%	45%
NO MENTAL HEALTH SERVICES	46%	47%	47%	55%

Note: Multiple responses possible. Low mental health (<42.0) scores indicate clinically relevant symptoms

These aggregate patterns of service utilization are essentially the same at all waves of interviewing. For example, at Time 5 (1998), among those whose scores would indicate need for mental health services, only 53% are receiving any services and the remainder, 47%, have gotten no therapy, psychological counseling or other mental health services during the six months prior to interview - rates essentially the same as when the CHAIN study began in 1994. The situation appears to have worsened slightly at the most recent wave of interviewing (Time 7, 2000). Rates of professional mental health care remain the same; however, fewer persons are receiving supportive mental health services. At the present time, more than half of respondents with low mental health scores are not receiving any mental health services at all.

Following Individuals Over Time

The final examination of patterns of service utilization follows the same individuals over time. We began with the subset of CHAIN study participants who were interviewed at each study period from Time 5 (1998) to Time 7 (2000) and who had low mental health scores at their Time 5 interview which will be considered their “baseline” assessment. We then examined reports of receiving any mental health services (professional services, supportive counseling or participation in a support group) at the time of interview and at each subsequent interview period. We repeated the analysis restricting service utilization to individuals with low mental health scores who had had one or more visit to a mental health professional during the time periods specified to examine stability in treatment over time.

As Table 3 shows, among the continuing cohort, 59% of those with low mental health scores were receiving some type of mental health services or had had services within six months prior to interview. For those who did not report receiving services at their Time 5 interview, an additional number did enter mental health care by the time of their Time 6 interview (approximately 9 - 12 months later). For those who still had not reported any mental health care by Time 6, we examined mental health service utilization described in their Time 7 interview (18 - 24 months after the Time 5 assessment). The table below presents cumulative percentages. Three-fourths (76%) of individuals with low mental health scores at Time 5 had received some type of mental health services within 18 - 24 months of assessment. One quarter had received no mental health services at all.

When we consider utilization of professional mental health services (having one or more visit to a psychiatrist, psychologist, therapist, or provider characterized as a “mental health care professional”) the rates of service utilization were relatively low within the initial six month period. However, the majority of persons meeting the threshold of need as defined here do receive professional mental health services within 12 months (54%). Nonetheless, almost 2 in 5 (38%) never had a visit with a mental health professional, not even a single visit for a clinical assessment, during the 24 month period under consideration here. (Table 3).

At the bottom of Table 3 we examine the length of treatment experience for those individuals who had low mental health scores at the Time 5 interview and had entered professional mental health care. Although the numbers are small (n=63) we can follow them over time to get some sense of the continuity of professional care. Note that 85% of these individuals continued to have low mental health scores, in the range indicating clinically relevant symptoms, at more than one interview period from Time 5 through Time 7. However only 40% of persons who had initially gotten professional services continued to receive them for 12 months or more.

**Table 3. ENTRY AND MAINTENANCE IN MENTAL HEALTH SERVICES
Among CHAIN Study Cohort with Low Mental Health Scores
at Wave 5 Interview**

Among those with Low Scores at Time 5 Interview	(n=156)
Received Any Mental Health Services:	
Currently or 6 months prior to interview	59%
Within 9 - 12 months	71%
Within 18 - 24 months¹	76%
Never within study period²	24%
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Received Professional Mental Health Services:	
Currently or 6 months prior to interview	40%
Within 9 - 12 months	54%
Within 18 - 24 months¹	62%
Never within study period²	38%
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Length of Continuous Treatment Among Those Who Received Professional Mental Health Services at Time 5 Interview	(n=63)
Approximately 6 months or less	29%
Between 6 - 12 months	39%
Between 12 - 24 months	32%
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Note: Based on T5-T7 continuing cohort only - respondents interviewed at every study period.

1. Cumulative percentage

2. No services during the period 6 months prior to 24 months after Time 5 interview.

Taken all together, whether viewed cross-sectionally or following a subset of individuals with mental health needs over time, these data indicate that there is considerable unmet need for mental health services among persons living with HIV/AIDS in New York City.

We turn now to a series of analyses investigating predictors of entry into mental health care among individuals with very low mental health functioning (<37.0), whose scores would definitely indicate need for treatment or services.

B. Predicting Entry into Mental Health Care

Systems of Medical Care

There is increasing interest in the relationship between HIV primary medical care and entry into mental health services. One approach to understanding this relationship is to examine how specific elements of NYC's health care infrastructure might be related to mental health service utilization. A prior CHAIN study report determined that there are several systems of care that pattern individuals' use of HIV medical services. For example, there are PLWH whose dominant medical provider over time is at 1.) a NYC public Health & Hospitals Corporation (HHC) hospital or clinic; 2.) a private, voluntary hospital facility or clinic; 3.) a neighborhood health center or at a drug treatment center; and 4.) at a private medical practice, whether it is a solo or a group practice. A fifth category consists of individuals who move from system to system, such that no one medical provider type predominates.

We will investigate the extent to which a person's location within a system of medical care affects the likelihood that he or she will access mental health services, among individuals with very low (< 37.0) scores on the mental health measure. We focus on the subsample of CHAIN study participants who have scores at the level found among psychiatric inpatients, indicating a greater likelihood of not only clinically relevant mental health symptoms, but symptoms consistent with psychiatric diagnosis. Prior analysis has shown that these are the persons with more serious and persistent mental health needs among the HIV positive population in New York City and the service population most in need of mental health care.

Table 4 illustrates the distribution of primary medical providers at each interview wave as characterized by their organizational setting, looking at the CHAIN cohort as a whole. Overall, voluntary hospital settings predominate, accounting for 41% and increasing to 52% of the cohort at any given interview wave. As this trend analysis reveals, community health centers and drug treatment facilities appear to be serving increasing numbers of PLWHs over time. Very few individuals have no regular medical provider and this proportion declines from 9% at baseline to 5% at Wave 7. In general, there are few major shifts or changes from year to year.

Table 4. Trends in Medical Provider Organizational Settings among the CHAIN Interviewed Sample

	Time 1	Time 2	Time 3	Time 4	Time 5	Time 6	Time 7
<i>Total Sample (n=)</i>	<i>(700)</i>	<i>(568)</i>	<i>(480)</i>	<i>(420)</i>	<i>(652)</i>	<i>(508)</i>	<i>(444)</i>
HHC	22%	22%	19%	19%	17%	16%	15%
Voluntary Hospital	41%	41%	48%	47%	49%	52%	51%
CHC/Drug treatment	15%	15%	15%	16%	20%	21%	21%
Private Doctor	12%	14%	14%	16%	10%	9%	8%
No Stable Pathway	9%	7%	3%	3%	5%	3%	5%

Source: Abramson and Sanger (2001). CHAIN Update Report #36.

A separate analysis of intra-individual pathways (data not shown), in which an individual's path is the accumulation of a dominant medical care provider over time, reveals similar patterns to those illustrated in Table 4. It seems likely, then, that the cross-sectional distribution represents a fair estimate of a relatively stable pattern of medical care provider settings within the HIV health services infrastructure in New York City.

Next we examine whether there is an association between being in a particular system of medical care and use of mental health services among CHAIN study participants with very low (< 37.0) mental health functioning. We examine medical pathways in two ways – in one, we investigated whether individuals who reported a specific medical care pathway (e.g. HHC, private doctor, etc.) are more likely than others to enter mental health services. We also examine the stability of an individual's pathway, regardless of which pathway it was. This will allow us to investigate whether there is a benefit that accrues to an individual who maintains continuity on a specific path, notwithstanding that this individual may switch individual providers or even hospitals, while staying within an organizational setting. In addition to the pathway variables we have included a number of additional variables in the analysis including client demographics (gender, race/ethnicity, education), history of drug use and HIV risk group (MSM vs other). We have also included the interview round as a potential explanatory variable, since this accounts for historical changes over time that may occur more broadly

Each of these analyses was conducted as a multivariate logistic regression, using a generalized estimation equation that allowed us to pool repeated observations across waves. In Table 5 we compare each of the medical care pathways to the other pathways, including the “no stable pathway” possibility. Shown are unadjusted equations in which only the pathway is correlated with the use of mental health services, without any of the other potential explanatory factors present. Also shown are adjusted odds ratios that describe the odds (or likelihoods) of receiving mental health services if a person is on a particular medical care pathway, while also controlling for demographic and other variables in the model.

Findings. The only significant difference is that, in the unadjusted equation, individuals with very low mental health scores who receive HIV primary care from private doctors are 3.2 times more likely to access professional mental health services than individuals using other systems of care.(Table 5). However, this finding disappears in the adjusted equation, which suggests that the other factors “explain away” the difference. Men who have sex with men are more likely than others to access mental health care, especially professional services, regardless of the organizational setting of their medical care. Individuals with very low mental health scores who are currently using drugs are less likely to use mental health services but individuals with a history of heavy drug use who are not currently active users (past 12 months) are more likely than others to enter care. Members of ethnic minority groups (African American and Latino) are less likely than others to use mental health services regardless of organizational setting of medical care, but differences do not reach statistical significance (data not shown).

The major finding is that, overall, there appears to be little relationship between type of HIV medical care system and use of mental health services when individual background characteristics and risk profile are taken into consideration. In the next analysis we examine these individual client characteristics, as well other services needed and services received as they predict entry into mental health care among individuals with very low mental health scores.

Table 5. Odds Ratios of Accessing Mental Health Services by Dominant Medical Path Among CHAIN Study Participants with Very Low (<37.0) Mental Health Scores

	Any Mental Health Services		Professional MH Services		Supportive MH Services	
	Unadj.	Adj.	Unadj.	Adj.	Unadj.	Adj.
# Observations	(465)	(465)	(465)	(465)	(465)	(465)
HHC	1.082	1.154	1.020	1.275	0.949	0.857
Voluntary Hospital	1.331	1.400	1.097	1.027	1.302	1.479
CHC/Drug treatment	0.719	0.902	1.101	1.446	0.975	0.897
Private Doctor	3.205*	1.417	3.300 *	1.242	1.169	1.209
No Stable Path	0.756	0.777	0.689	0.737	0.781	0.755

* p < .05

** p < .01

1. Voluntary” refers to voluntary and not-for-profit hospitals and associated clinics, “HHC” refers to New York City Health and Hospital Corporation (public) hospitals and clinics, and “Private MD” refers to solo or group medical practices.
2. Professional Mental Health services based on client reports of one or more visit to a psychiatrist, psychologist, therapist, or “other mental health care professional.” Supportive Services includes either receipt of supportive counseling from a social worker, pastoral counseling, or participation in a support group.
3. Unadjusted odds ratios describe the odds (or likelihood) of a particular outcome occurring for individuals in one category compared to individuals in all other medical system categories.
4. Adjusted odds ratios describe odds (or likelihoods) as described above in Note 2, in addition to controlling for gender, race/ethnicity, education, HIV risk (MSM vs other), drug use history, and the round of the interview.

Services Needed and Services Received

Prior CHAIN reports that have examined correlates of mental health needs and service utilization (Aidala, 1996; Aidala 1997) have documented that persons with low mental health functioning often have many other service needs. They often struggle with chronic substance abuse problems. Many have a history of housing and economic problems and limited networks of social support. Our next analysis of pathways into mental health care will examine other services needed and services received as predictors of mental health service use.

For this analysis we use a statistical procedure called “event history analysis” (Tuma & Hannan 1984). An event history describes how an individual moves into and out of some status (e.g. in and out of mental health care) and the duration or time between events (e.g. how long he or she stays in care). The unit of analysis is not the individual but the event. Public health researchers may be more familiar with the closely related statistical procedures of hazard or survival analyses. Both are statistical techniques for determining the probability that an individual will experience an event within a particular time

period. For this analysis, we will examine what predicts entry into any type of mental health services by the next interview for persons with very low mental health scores (< 37.0) at the time of assessment.

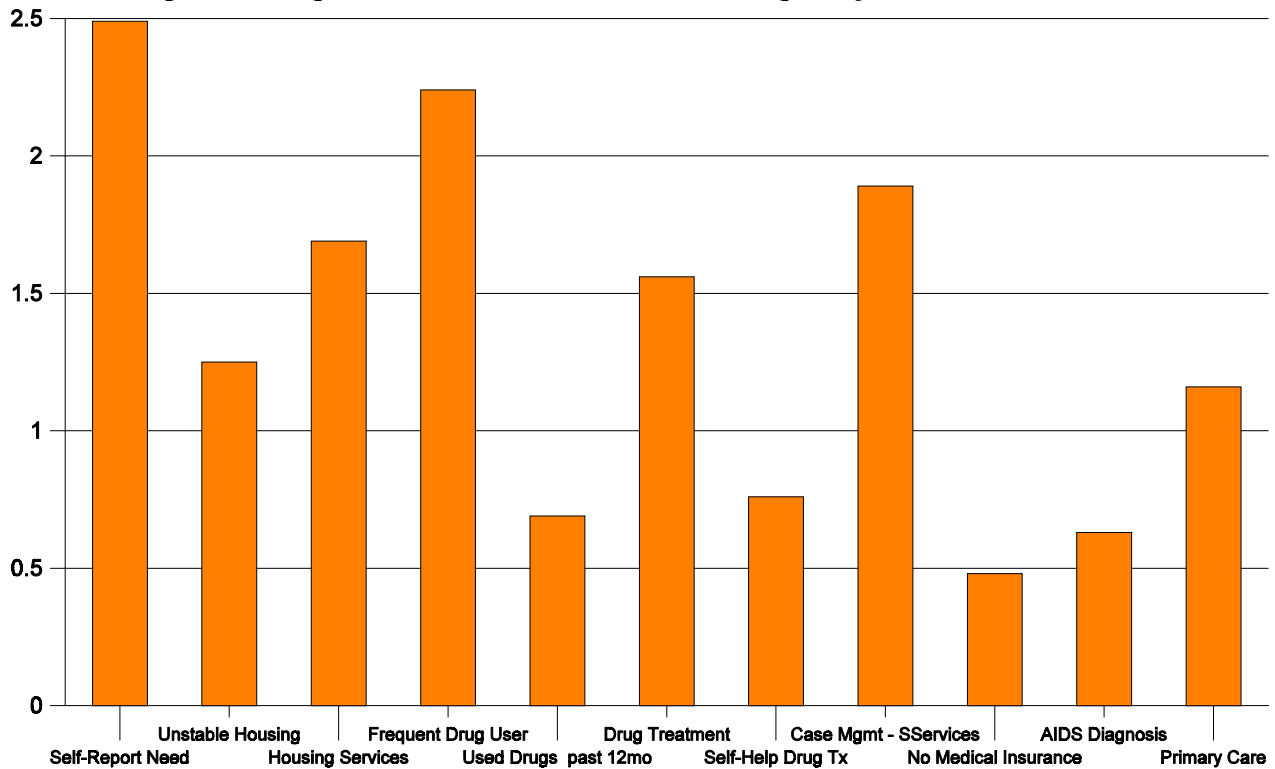
We looked at three additional service areas: case management, drug treatment, and housing. Need for services was defined as followed: Respondents were coded as frequent drug users if they had used heroin or crack/ cocaine three times a week or more often at some point in their lives although not necessarily in the recent past. Current user was defined as someone who used any heroin or crack/cocaine, or reported problem drinking, in the 12 months prior to interview. Homelessness or unstable housing during the six months prior to interview was considered need for housing services. Homelessness as well as not having medical insurance were indicators of need for case management services. Self-perceived need for mental health services was added to the model based on respondent's response to a question asking whether or not he or she had experienced "any emotional or psychological difficulties, including relationship problems" in the six months prior to interview.

Client self-reports are the source of data on services received. Drug treatment services are measured as participation in a self-help group or receipt of more formal agency or clinic-based treatment services. We differentiated types of case management services and included in the model case management oriented toward meeting social service needs, based upon a respondent's report that a case manager developed or revised a care plan, helped the client get specific social services, checked that services were being obtained, or filled out forms for benefits or entitlements. Respondents were coded as receiving housing services if they got "practical help" in resolving their housing problems from a housing agency or other provider in a position to assist with housing needs.

Since the prior analyses showed that organizational setting of HIV medical care is not associated with mental health service utilization, this variable was not included in the present analysis. Rather than a structural characteristic of HIV medical care, we included an indicator of comprehensive primary care. With very few exceptions, CHAIN study participants have a regular source of medical care. What distinguishes among them is the extent to which they have access to comprehensive primary care characterized by coordination, comprehensiveness, and access. Respondents who answer that they have one medical provider whom they consider in charge of their overall HIV care; that in the six months prior to interview they have always had someone to go to for routine checkups, vaccinations, or medical tests; someone they could go to for information or advice about health concerns; and someone whom they could call in case of a medical emergency, 24 hours a day, are coded as having coordinated and comprehensive primary HIV care. A number of individual client characteristics were also added to the model: sex, ethnicity, risk exposure group (MSM vs other) stage of illness (AIDS diagnosed), educational level (less than high school).

Findings. The basic findings of the event history analyses are summarized in Figure 2. The graph shows the relationship between needing and receiving services and entry into mental health services using the *odds ratio* statistic. This statistic describes how much receiving a service increased the odds of a specific outcome. For example, an odds ratio of two indicates that an individual who got the service would double his or her odds of getting into mental health services, controlling for the other variables in the analysis. Odds ratios greater than one indicate that the service is associated with *increased* entry into mental health care; a value of two or more represents a substantial impact.

Fig. 2 Longitudinal Odds of Accessing Any Mental Health Services



Services needed and services received

The above graph shows the relationship between needing services and receiving services as they affect accessing any mental health services among CHAIN participants with very low mental health scores (< 37.0). Consistent with prior investigations into pathways into mental health services, the present analysis again directs our attention to the importance of self-perceived need for mental health services (Figure 2). Individuals who answer “yes” to direct questions about emotional or psychological problems are 2.5 times more likely to access care as those who answer “no” regardless of their low mental health scores. The biggest predictor of entry into mental health care is self-perceived and articulated, need for care.

Case management addressing social service needs significantly increases the odds that persons experiencing mental health symptoms will enter some type of treatment or care. A history of more involved drug use also increases the chances that a person with very low scores will get mental health services by the next interview, although it does not reach statistical significance. The drug use finding most likely represents the role that drug treatment plays in facilitating psychological treatments and therapy among the most seriously drug involved individuals in the sample. Receiving housing services for those who have a housing problem helps persons with low mental health scores access treatment. Having good primary medical care is not in itself sufficient to increase the odds that person in need of mental health services will get services. Not having any medical insurance is a barrier to receiving mental health treatment but is not a statistically significant predictor when other variables such as case management, housing status and services are considered. The remaining variables including gender, race/ethnicity, MSM risk category, stage of illness, and low education were neither positively nor negatively associated with accessing mental health services, once the other variables in the model were controlled for. Table 6 presents the full longitudinal odds ratios.

Table 6. Longitudinal Odds Ratios of Relationship between Very Low Mental Health Scores and Accessing Mental Health Services, CHAIN data 1995-2000

	Moved from No MH Services to MH Services
<i>Service Needs & Services Received</i>	<i>Entry into Any MH Services</i>
Comprehensive Primary Medical Care	1.160
Self-report emotional/ psychological problems	2.487 *
Homeless/ unstable housing past 6 months	1.250
Received housing services past 6 months	1.649 #
Frequent drug user: lifetime	2.239
Used drugs past 12 months	0.693
Received drug treatment services at prior interview	1.564
Self-help drug treatment at prior interview	0.795
Received case management for social services at prior interview	1.889 *
No medical insurance	0.476
AIDS diagnosis	0.629
Male	0.642
Less than high school education	1.555
African American	0.814
Latino	0.881
Risk: MSM	1.406

p ≤ .10 * p ≤ .05 ** p ≤ .01

Note: Numbers above 1.0 indicate factors that increase the likelihood of persons with very low mental health scores and no services getting services by the next interview

The HIV Health and Human Services Planning Council Workgroup on Mental Health has estimated that use of HIV-specific mental health services appear very low in comparison to likely need, and that screening for mental health problems is not routinely done (Havens et al. 2002). It is likely that the limitations of the current service delivery system interact with client attitudes and apprehensions to place serious barriers to the utilization of mental health services among those who need them. Our data suggest that many HIV infected individuals experience a general distrust of mental health providers, perhaps, for some, based on previous negative experiences, but more often associated with perceptions of stigma

associated with mental illness and doubts about the usefulness of traditional “talking” therapies in comparison with what are experienced as more pressing needs for financial assistance, housing, food, etc. In addition, disability related to psychological impairment can itself impair a client’s perception of need for mental health services. Self-recognition of need as well as effective case management to assist clients to navigate through what can be a complicated assessment and referral process appear to be especially important factors for accessing mental health care in the current service environment.

C. Co-Location of Mental Health Services

The next set of analyses switches analytical focus and considers individuals who have accessed mental health services, regardless of whether their current mental health status is low or very low on the mental health measure. For this analysis, we will combine responses for CHAIN study participants, using the most recent interview from among those surveyed at Time 7, Time 6, or Time 5 (1998 - 2000). For example, if a respondent completed a Time 7 interview, we will use that information. If they did not complete a Time 7 interview, we will obtain the information from their Time 6 (if available) or Time 5 survey. All together 408 individuals had some contact with mental health services during this period. We begin by an analysis of co-location of mental health and other services. We will consider any services including having at least one visit with a mental health professional, receiving supportive counseling, or participating in a support group within the six months prior to most recent interview. Co-location is measured at two separate levels. Individuals may receive different services such as mental health treatment and case management services at the same agency and service site. In addition, they may receive services at a different service setting within a broader parent organization. For example, an individual may receive mental health services from a hospital based clinic and case management from an affiliated store front drop in center for homeless persons. Note that we cannot determine the program availability of co-located services at any particular agency. We are detailing patterns of co-location as utilized by CHAIN study participants.

Table 7 presents the results of the co-location analysis. We can see that mental health services are most often co-located with case management. A full half (50%) of all CHAIN study participants who have received any type of mental health care within the most recent interview period, received treatment at the same agency and service site where they are receiving case management. The next most common pattern is co-location of mental health services with medical care. For 37% of clients who have received mental health services, they received these services at the agency where we find their current HIV medical provider. For another 7% of people with HIV who are receiving mental health services, these services are accessed at a service site that is part of the broader, parent organization encompassing respondents’ medical health provider.

Approximately one in five persons (19%) with HIV who are receiving any mental health services are receiving care at an agency that provides them drug treatment. A slightly smaller proportion (16%) of PLWHs receive mental health care at an agency that provides them housing services. Some proportion of this is undoubtedly the result of supportive housing arrangements where onsite mental health and other supportive services are an integral part of the model of care.

Table 7. CO-LOCATION OF MENTAL HEALTH WITH OTHER SERVICES

Among Those Who Received Any Mental Health Services at Time 5, Time 6, or Time 7		(n=408)
Mental Health Co-Located with Primary Care		
Both services within the same agency		37%
Both services within the same parent agency		7%
Both services, independent agencies		55%
Not receiving primary care		1%
Mental Health Co-Located with Case Management		
Both services within the same agency		50%
Both services within the same parent agency		1%
Both services, independent agencies		27%
Not receiving case management		22%
Mental Health Co-Located with Drug Treatment		
Both services within the same agency		19%
Both services within the same parent agency		1%
Both services, independent agencies		16%
Not receiving drug treatment services		64%
Mental Health Co-Located with Housing Services		
Both services within the same agency		16%
Both services within the same parent agency		1%
Both services, independent agencies		28%
Not receiving housing services		55%

1. Based on most recent report of any mental health services among respondents interviewed at T7, T6 or T5.
2. "Same agency" refers to services received at same agency, same service site
3. "Same parent agency" refers to services received at separate service sites, within a larger service organization.

The relatively high rates of co-location of mental health and case management services is not surprising since case managers are important providers of supportive counseling and the majority of support groups for persons living with HIV/AIDS are found in case management or community based, multi-service agencies. However, case management is an important gateway to professional mental health services as well. We ran the co-location analysis, restricting mental health services to professional mental health treatment. The rates of co-location with case management approach rates of co-location with medical

care. Approximately 35% of respondents receiving professional mental health services receive them at the same agency where they receive case management, compared to 41% co-location with their primary medical care provider. These overall patterns suggest an increasing incorporation of case management and supportive services within medical care settings serving persons living with HIV/AIDS in New York City which should help clients with mental health needs to access services and follow through on treatment plans.

D. Client Reported Referral Patterns

The final approach to understanding patterns of entry into mental health services is to examine descriptions CHAIN study participants give regarding how they first came to their current mental health provider (Table 8). This analysis will be restricted to individuals who had at least one visit to a psychiatrist, psychologist, therapist or other mental health provider within six months of their most recent interview conducted at Time 5, Time6 or Time 7 (n= 259). Respondents were asked if they went on their own or if they were referred to their current professional mental health provider. If referred, the source of referral is recorded and coded. Results of this analysis are shown in Table 8.

Table 8. CLIENT REPORTED REFERRAL FOR PROFESSIONAL MENTAL HEALTH SERVICES

	Percent of all Patients (Time 5,6 or 7)
<i>Total Sample Receiving Professional Mental Health Services</i>	(259)
Were you referred?	
Went to Provider On my Own	29%
Was Referred to Provider	69%
Was Taken There/ Already There	2%
<i>Among those referred</i>	(187)
Who Referred You?	
Medical Provider	44%
Case Manager	24%
Friend, Family Member	19%
Other, including Drug Treatment	13%

Note: Rates based on most recent entry into professional mental health services as described in T7, T6 or T5 interview. Row percentages shown.

The most common source of direct referral into professional mental health services for persons living with HIV/AIDS is a medical provider. Forty-four percent of the sample who had visited a mental health professional in the six months prior to interview report that were referred by their medical provider. Case managers are the next most common source of referrals for mental health treatment. About one-quarter (24%) of all CHAIN participants who had visited a mental health professional, went there for the first time on the recommendation and referral of a case manager. Family, friends and other informal sources of referral are also common. Although the data are not available, one suspects that family and friends are a source of information about which provider to utilize, as well as providing support for the decision to seek care. The bulk of referrals characterized as “other” on Table 8 were from drug treatment providers.

Table 9. PATTERNS OF REFERRAL FOR MENTAL HEALTH SERVICES

		Medical Provider	Case Manager	Friends, Family	Other
Gender					
Women	(70)	56%	23%	1%	7%
Men	(117)	37%	24%	22%	17%
Race/Ethnicity					
Black	(82)	48%	24%	17%	11%
Latin	(62)	42%	23%	19%	16%
White	(41)	39%	22%	24%	15%
Problem Drug Use					
Current User	(30)	33%	31%	25%	11%
Former User	(121)	43%	26%	19%	12%
Never Used	(30)	60%	37%	13%	20%

Note: Most recent entry into professional mental health services based on T7, T6 or T5 interview.

Table 9 (above) continues this analysis and examines patterns of referral into mental health services by client background characteristics. Women (59%) receiving professional mental health services were more likely than men (43%) to have been referred by a medical provider. Ethnic minorities with mental health needs are less likely than nonHispanic whites to receive professional mental health services (see Aidala, et al. 1996; 1997). However, referral into care for those who do use services is still for the most part via their HIV medical provider. The biggest differences in self-reported patterns of referral mental health services is among persons with different substance abuse histories. Individuals who are actively using drugs are less likely than others to enter mental health via a referral from their medical provider; case managers, drug treatment facilities, and informal sources (family, friends) are as important for them.

SUMMARY

Overall, there is considerable unmet need for mental health services among persons living with HIV/AIDS in New York City. As in earlier analyses, self-perceived need for treatment or services remains the biggest predictor of accessing care among those with need for services indicated by low scores on a standardized measure of mental health functioning. Although medical providers are the most common source of direct referral for professional mental health services, having a medical provider, even a provider who meets standards of comprehensive primary care is not predictive of entering mental health care among those whose scores indicate treatment need..

There are several systems of care that pattern individuals' use of HIV medical services in New York City. There are PLWHs whose dominant organizational setting of medical care over time is at: a NYC public Health & Hospitals Corporation (HHC) hospital or clinic; a private, voluntary hospital facility or clinic; a neighborhood health center or at a drug treatment center; a private medical practice; as well as individuals who move from system to system. Other CHAIN reports have shown that system of medical care affects a number of health outcomes and service utilization pattern. However, there is no relationship between organizational setting of medical care and entry into mental health services.

Case management is perhaps the most important entry point for accessing mental health services for the broad numbers of person with mental health needs, and they provide the bulk of supportive mental health care. In a series of other analyses not reported here, the CHAIN study found that the best outcomes for clients with mental health needs result from receipt of professional mental health treatment followed by ongoing supportive services such as supportive counseling or peer group participation (Abramson et al. 2000). Case managers located in medical settings, and mental health providers located in a range of service settings, greatly facilitates such a continuum of care.

Findings from this study of pathways into mental health care point to the importance of strengthening the screening, assessment and referral processes to facilitate more timely entry into appropriate mental services for individuals in need of such care who do not recognize or hesitate to admit their treatment need.

References

Abramson D, Aidala A, Lee F. Comorbid Conditions: Intersecting Needs among the CHAIN Cohort. Community Health Advisory & Information Network Update Report #24. Columbia School of Public Health. 2000.

Abramson D, Sanger N. Pathways to Systems of HIV Medical Care in New York City. Community Health Advisory & Information Network Update Report #24. Columbia School of Public Health. 2001.

Aidala A. Need for HIV Mental Health Services and Service Utilization in New York City. Community Health Advisory & Information Network Technical Report #16. Columbia School of Public Health. 1996.

Aidala A. Continuing Need for HIV Mental Health Services and Service Utilization. Community Health Advisory & Information Network Update Report #9. Columbia School of Public Health. 1997.

Aidala, A. Mental Health Services and Treatment Needs. Community Health Advisory & Information Network Update Report #29. Columbia School of Public Health. 2000

Aidala A, Abramson D, Lekas M. The Unconnected Revisited: Persons Living with HIV who are Outside the Medical and Social Services System. Community Health & Advisory Information Network Briefing Paper #1.

Columbia School of Public Health. 1999.

Aidala A, Messeri P, Abramson D, Heaton C. The "Unconnected" - Service Needs of HIV Positive Persons who are Outside or Marginal to the Service Delivery System. Community Health Advisory & Information Network Technical Report #9. Columbia School of Public Health. 1995.

Ewig JA.. Detecting Alcoholism: The CAGE Questionnaire. JAMA 252: 1905 - 1907. 1984

Havens, J et al. Year 12 Mental Health Workgroup Priorities and Recommendations. March, 2002.

McHorney CA, Ware JE, Raczek AE. 1993. The MOS 36-Item Short-Form Health Survey (SF-36): II. Psychometric and Clinical Tests of Validity in Measuring Physical & Mental Health Constructs. Medical Care 31: 247-263.

Messeri P, Abramson A, Lee F, Lee G, Aidala A. The Impact of Ancillary Services on Entry and Retention to HIV Medical Care in New York City. Community Health Advisory & Information Network Update Report #30. Columbia School of Public Health. 2000

Ware JE, Gandek B, et al. The SF-36 Health Survey: Development and Use in Mental Health Research & the IQOLA Project. Int. J. Mental Health 23 (2):49-73. 1994.

Tuma NB, Hannan M. Social Dynamics: Models and Methods. New York: Academic Press. 1984.