Update Report # 37

C.H.A.I.N. REPORT

Housing and Health Care among Persons Living with HIV/AIDS

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Much of the present report is a summary and extension of analyses found in prior CHAIN studies:

- Messeri P, Abramson D, 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.

- Aidala A, Lee G. Housing Assistance and Housing Stability Among Persons Living with HIV/AIDS. Community Health Advisory & Information Network Update Report #32. Columbia School of Public Health. 2000.

- 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.

In addition, some material presented here has also been presented in a collaborative work between the Mailman School of Public Health and Bailey House, Inc. The Baily House study was funded by The New York Community Trust and The Jacob and Valeria Langeloth Foundation.

- Aidala A, Jackson T, Fuentes-Mayorga N, Burman R. Housing, Health and Wellness Study: A Collaborative Project by Columbia University School of Public Health and Bailey House, Inc. October, 2000.

INTRODUCTION

Prior CHAIN studies as well as other research have shown that homelessness or unstable housing is associated with lower rates of regular medical care and access to medical treatments, and poses special challenges for adherence to complex treatment regimens (See review in HRSA 1999. See also Messeri et al. 2000, Abramson, Lekas et al. 2000; Messeri 1999; Aidala 1999; Cunningham et al. 1999; Gallagher et al.1997; McMurray-Avila 1997; Arno et al. 1996; Aidala et al. 1995; Wood & Valdez 1991). Housing is one of the greatest needs of persons living with HIV/AIDS; approximately 60% of CHAIN study participants have been unstably housed, inadequately housed, or without housing altogether at some point during the study period. The press of daily survival needs, and the transiency of life without a secure "home" pose special challenges for HIV-positive individuals, especially those individuals also challenged by mental illness and/or chronic substance abuse problems. Concern about the marginal involvement of the homeless in medical care systems and the potential for nonadherence to treatment regimens, has led some providers to hesitate prescribing complex treatment to persons with a history of housing instability. As a recent article in the *Journal of the American Medical Association* concluded, "As much as possible, patients must be stabilized with respect to housing, contact with the health care system, chemical dependency, and mental illness" (Bangsberg et al. 1997: 65).

The overall goal of the present study is to investigate the role of housing and support services in facilitating entry into medical care, access to quality care, and retention in care over time among individuals living with HIV/AIDS who have a history of homelessness. A companion report will address the role of housing and supportive services in facilitating access and adherence to combination therapy. Specific research questions for the present report are: 1)What is the relationship between housing status and access and engagement with medical care? 2)What is the association between receipt of housing services and measures of connection to medical care among PLWH/A with a history of homelessness? 3)How does the relationship of housing services to the outcomes vary among previously homeless PLWH/A who are also struggling with mental illness and/or substance abuse? 4)What is the effect of different models of housing services in strengthening connections to medical care among the subpopulations studied? 5)To what extent are additional supportive services such as case management, mental health counseling, etc., related to improved outcomes among the sub-populations studied?

KEY FINDINGS

- The data from seven waves of CHAIN study interviews from 1995 to 2000 show that there is a significant relationship between homelessness/unstable housing and remaining outside of or marginal to HIV medical care.

- Providing housing services has consequences for increasing access and engagement with medical care among homeless or unstably housed persons living with HIV. People with housing needs who get any kind of practical housing assistance are almost four times more likely to enter into medical care than those who do not get housing assistance, and they are twice as likely to enter into and continue in care that meets current clinical standards for treatment of HIV/AIDS.

- Case management and referrals to needed services also affect entry into medical care.

Among those who need service coordination, persons who receive case management oriented toward housing and other needed social services are almost ten times more likely to enter appropriate medical care than those who do not get case management services.

- Medical case management providing medical referral or focusing on medical coordination also increases the odds of entering medical care among those outside of care. However, receiving case management oriented toward securing housing and other social services has a greater impact on entering medical care and maintaining appropriate care over time than case management focused on medical issues as such.

- A number of analyses point to the importance of additional supportive services , especially mental health services and ongoing support for drug abuse issues provided by self-help drug treatment (e.g. NA, AA), in addition to case management and housing services as exerting the greatest impact on entry and retention into medical care among the formerly unconnected. This points to the importance of service linkages and integrated service models of care, especially for homeless persons with HIV who also struggle with mental illness and chemical dependency.

BACKGROUND AND METHODOLOGY

A. The CHAIN survey and data

The role of housing services in strengthening connections to medical 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 and more than half of these have been homeless or precariously housed at some time during the study period. For some analyses, we will attempt to answer the research questions by examining the relationship between the *situation* of being homeless or unstably housed and indicators of connection to medical care. At other times, we will focus on the subset of individuals with a history of housing instability for whom we have five or more waves of interview data (n=419). This allows us to track changes over time within the same individual.

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. At each round of interviews participants are asked about their current living situation, their recent history of housing instability, and whether or not they have had any housing problems or need for assistance with housing issues. Information was also obtained about rental assistance, housing placement or other housing services received.

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 the role of housing services for treatment access and adherence is limited by the fact that detail about different housing service models is not available in the CHAIN data set. Often we can designate formerly homeless persons only as either 'had services' or 'no services'.

For some analyses, we used the entire CHAIN sample, comparing study participants with a history of homelessness with those who have never experienced housing instability. Most of our analyses, however, focus on the subset of CHAIN respondents who had one or more episodes of unstable housing since they became aware they were HIV positive, and for whom we have over time data (n=419).

Measuring Homelessness/ Housing Instability**.** We ask respondents about their current living arrangements and recent history (any time during the six months prior to interview) of unstable or inadequate housing. Persons who describe themselves as homeless, or sleeping on the street, in a shelter, an SRO or welfare hotel, or in an abandoned building, a public or private place not intended for sleeping (e.g. subway station) will be considered 'unstably housed'. Also included are individuals currently in jail, a halfway house, or drug treatment housing with no other address, or temporarily doubled up with friends or family, in someone one else's home. This definition follows

closely the definition of homelessness adopted by the Housing Workgroup of the NYC HIV Planning Council and includes not only clients who are literally homeless but also those who are precariously housed, who lack a stable, permanent living situation they can comfortably maintain. As the HRSA Bureau of Primary Care has emphasized, recognition of the instability of an individual's living arrangement is crucial to the definition of homelessness (HRSA, 1999)[1].

Measuring Medical Care. A number of different measures of access to medical care, quality of care, continuity of care, access to treatment and adherence to treatment regimens have been used in different analyses of relationships between housing and health care in the CHAIN sample. The specific indicators and measures used will be discussed below, in conjunction with the specific analysis undertaken.

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

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

1 Source: NYC DOH Office of AIDS Surveillance

[1] In 1997 the NYC HIV Council Housing Work Group put forth a definition of homelessness, based on the McKinney Act: A homeless person is defined as an individual who lacks a fixed, regular and adequate night-time residence; and whose primary nighttime residence is a shelter, an institution that provides temporary residence for individuals intended to be institutionalized, or public or private place not designated for or ordinarily used as a regular sleeping accommodation. Individuals who are at imminent risk of losing their housing because they are being evicted from their residence or are being discharged from institutions and have nowhere else to go are also considered to be homeless.

HOUSING, SERVICES AND CONNECTION TO HIV MEDICAL CARE

1. Housing Status and Connection to Medical Care

Analytical approach and measures. We will consider a number of indicators of connection to medical care including timely or delayed entry into medical care after initial awareness of HIV diagnosis and access to medical care that meets minimal clinical practice standards. Our determination of whether the medical care an individual receives is consistent with standards for appropriate medical care for HIV is based on interview data assessing the number of visits for outpatient care, receipt of diagnostic services such as blood work-ups for CD4 T-cell counts and viral loads, and drug therapies. Standards for HIV medical care were obtained from those promulgated by the New York State Department of Health (NYS DOH) AIDS Institute[2]. We also have a separate measure of "comprehensive primary care." At each wave of interviews, study participants were asked a series of questions about specific features of their medical care such as whether their provider offers primary care characterized by coordination (single doctor or medical person "in charge of overall HIV care"), comprehensiveness (indicated by the provision of "routine check-ups, vaccinations, and medical tests" as well as being a place they could go for "information or advice about a health concern") and access (whether they can "call up 24 hours a day" their provider, in case of a medical emergency). These features of coordination, comprehensiveness, and access have been established as characteristics of "good" primary care (Flocke et al. 1995) that patients can reliably report upon.

We will also consider continuity of care - - whether or not individuals remained with the same medical provider over time or discontinued care or changed providers. One of the most important predictors of success with the newer, protease-based treatments for HIV is continuity of care -- maintaining an ongoing relationship with a medical provider who can coordinate, monitor and adapt treatments and support adherence. Homelessness or unstable housing is one of the biggest risks for discontinuous care. Individuals who are struggling with housing issues are often in and out of care as other more pressing needs compete for time and attention (Cunningham et al. 1999). Frequent changes of address complicate receiving continuous care from the same medical provider.

To examine the relationship between housing status and these indicators of access and engagement with medical care, 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 or recent housing instability and his or her connection (or lack of connection) to medical care. Considering 968 individuals who were interviewed up to seven times each, we have close to 4000 observation points and almost one-fourth of these represented interviews that were completed with PLWHs who were homeless or unstably housed at the time.

Findings. The relationship between housing status and medical care is strong and consistent (see Table 2). Almost all CHAIN study participants have a source of medical care. However, when interviewing PLWHs who were homeless or unstably housed, 13% of the time they were without

[2] Sources include New York State AIDS Institute "Protocols for the Primary Care of HIV/AIDS in Adults and Adolescents" (Nov 1995), the latest edition of "Criteria for the Medical Care of Adults with HIV Infection" by the AIDS Institute (Mar 1998), and personal interviews with key program staff at the AIDS Institute.

any source of medical care at all. The rate of being without medical care is only 3% for persons living with HIV/AIDS in New York City who were not also facing housing issues (Table 2).

Table 2
HOUSING STATUS AND CONNECTION TO HIV MEDICAL CARE

	Stably Housed at Interview	Homeless/ Unstably Housed [1]
Total Number of Observations (n=)	(2874)	(898)
NO SOURCE OF MEDICAL CARE		
Does not have any medical provider for HIV care at time of interview	3%	13% ***
LACK OF ADEQUATE CLINICAL CARE		
Is not receiving medical care that meets minimum clinical practice guidelines	23%	32% ***
COMPREHENSIVE PRIMARY CARE		
Does not have primary medical care that is coordinated, comprehensive, and provides 24 hour access	30%	42% ***
INTERRUPTION OF MEDICAL CARE		
Discontinued medical care or changed in medical provider since last interview	25%	32% **
LACK OF MEDICAL INSURANCE		
Has no medical insurance of any kind to cover HIV care at time of interview	3%	10% ***
DELAYED ENTRY INTO CARE[2]		
Delayed 3+ months after HIV diagnosis before entering any medical care	20%	34% ***

1. CHAIN study respondents who at the time of interview or in the 6 months prior to interview report being homeless, sleeping in the street, a shelter, an SRO or welfare hotel, in an abandoned building, a public or private place (eg subway station) not intended for sleeping, in jail, halfway house, or drug treatment housing with no other address, or temporarily doubled up with others For delayed entry into care, housing status is considered for the year of diagnosis.

2. Delayed entry into care examines initial entry into HIV medical care among individuals with a history of homeless or housing instability either at the time of diagnosis, or any time during the study period.

* $p \leq .05$ * * $p \leq .01$ ** * $p \leq .001$

When we move beyond simply having a source of care to examining characteristics of care received, we again see differentials between the housed and unhoused. One third of the time, homeless respondents were not receiving care that met minimum clinical practice guidelines, compared to 23% of the situations described by the stably housed during their interviews. Turning to the measure of comprehensive primary care, the rates of less than optimal care are 42% for those experiencing housing instability and 30% for CHAIN participants in stable living arrangements.

As anticipated, homeless or unstably housed persons were more likely to report disruptions in medical care since their last interview (a period of 6 to 12 months). One third of the time, an interview with a person who reported housing difficulties also included reports of discontinuous medical services. One reason for dropping out of care may be lack of medical insurance. Although all New Yorkers living with HIV are eligible for a range of medical benefits, 10% of the time, homeless persons living with HIV were without any benefits to cover medical costs. For a subset of HIV positive clients, more likely among the homeless than any other subpopulation, individuals gain and loose insurance benefits due to a variety of personal (missing certification appointments) as well as organizational factors (administrative errors, eligibility rules).

We also examined patterns of entry into HIV medical care after initial diagnosis. More than one-third of persons with a history of homelessness or housing instability (unstably housed at time of diagnosis or any time during the study period) had delayed 3 months or longer after diagnosis before their first visit to a medical provider for HIV. This compares to 20% "delayers" among persons with no history of housing instability. Delayers who were also struggling with housing stayed out of care longer than their stably housed counterparts. If unstably housed persons did not enter care within the first months after diagnosis, they remained outside of care entirely for an average of 26.5 months (data not shown). When we restrict the sample to PLWHs diagnosed after 1995 and the advent of promising therapies for HIV, housing instability remains one of the strongest predictors of delayed entry into care (see Aidala, 1999).

2. Unstable Housing, Multiple Diagnoses and Connection with Medical Care

Next we examine the relationship between housing and connection with HIV medical care as well as the relationship between housing, drug use and low mental health -- factors hypothesized to also affect access to care. In cross-sectional analyses of the CHAIN data, at each study wave we found statistically significant associations between housing and other comorbidities and the likelihood that an individual entered into primary HIV medical care that met minimum practice guidelines, or that an individual maintained appropriate medical care at consecutive interviews (see Table 3). At various interview times, substance use, unstable housing or both simultaneously were associated with not entering, or not maintaining, minimal primary medical care. While it is clear that unstable housing puts individuals at risk of remaining outside the HIV medical care system, many individuals with housing difficulties also struggle with drug addiction and/or mental health problems that complicate both housing success and connection to medical care. The findings summarized in Table 3 suggest that not only housing services but a broad array of supportive services are necessary to facilitate engagement with medical care among persons with a history of housing instability.

Table 3

FACTORS ASSOCIATED WITH NOT ENTERING APPROPRIATE MEDICAL CARE, OR NOT RETAINING APPROPRIATE MEDICAL CARE

	WAVE 2	WAVE 3	WAVE 4	WAVE 5	WAVE 6
Period covered (n)	7/95 - 7/96 (568)	2/96 - 12/96 (480)	10/96 - 10/97 (420)	10/97 - 11/98 (652)	11/98 - 1/00 (495)
Factors associated with not entering appropriate medical care	**Unstable housing** **Drug use** **Unhoused drug user**	**Unhoused drug use**	**Individuals with low mental health, drug use, and unstable housing**		**Drug use**
Factors associated with not maintaining continuously appropriate medical care	**Unstable housing** **Low mental health & drug use**	**Unstable housing**	**Unstable housing** **Unhoused drug user**	**Drug use** **Unstable housing**	

Note: Shown are characteristics of individuals that operate either singly (e.g. unstable housing) or jointly (e.g. unhoused drug user) to significantly reduce the likelihood of entering into appropriate HIV medical care or once in care, continuously maintaining appropriate medical care (Source: CHAIN Update Report # 24).

3. Over-time Analysis of Housing and Supportive Services and Entry into HIV Medical Care

Next, we examine the role of housing and supportive services as they affect connection to medical care, analyzing the combined CHAIN survey data from five rounds of interviews conducted between 1994 and 1998. Our analysis measured whether use of supportive services increased the chances that a person not in medical care at one interview would enter care by the next interview. The model included history of homelessness or housing instability, history of drug use, very low mental health functioning, and a number of other client characteristics. This way we could assess the impact of housing and other services while controlling for an individual's gender, race/ethnicity, education, residence in a high poverty neighborhood, and stage of illness, as well as substance use and housing history. This permitted us to assess, for example, the impact of supportive services on medical care outcomes among all individuals with the same race/ethnic or educational background or level of housing need. The same basic model will be used to examine the role of housing and supportive services on entry into 'good' medical care, care that meets preferred practice standards, and in the final analysis, which predicts retention in appropriate medical care over time.

Analytical approach and measures**.** For this set of analyses we will conduct a number of multivariate analyses, attempting to isolate the factors that influence how individuals move into and out of medical care using 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

medical 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 (Cox, 1972). Both are statistical technique for determining the probability that an individual will experience an event within a particular time period.

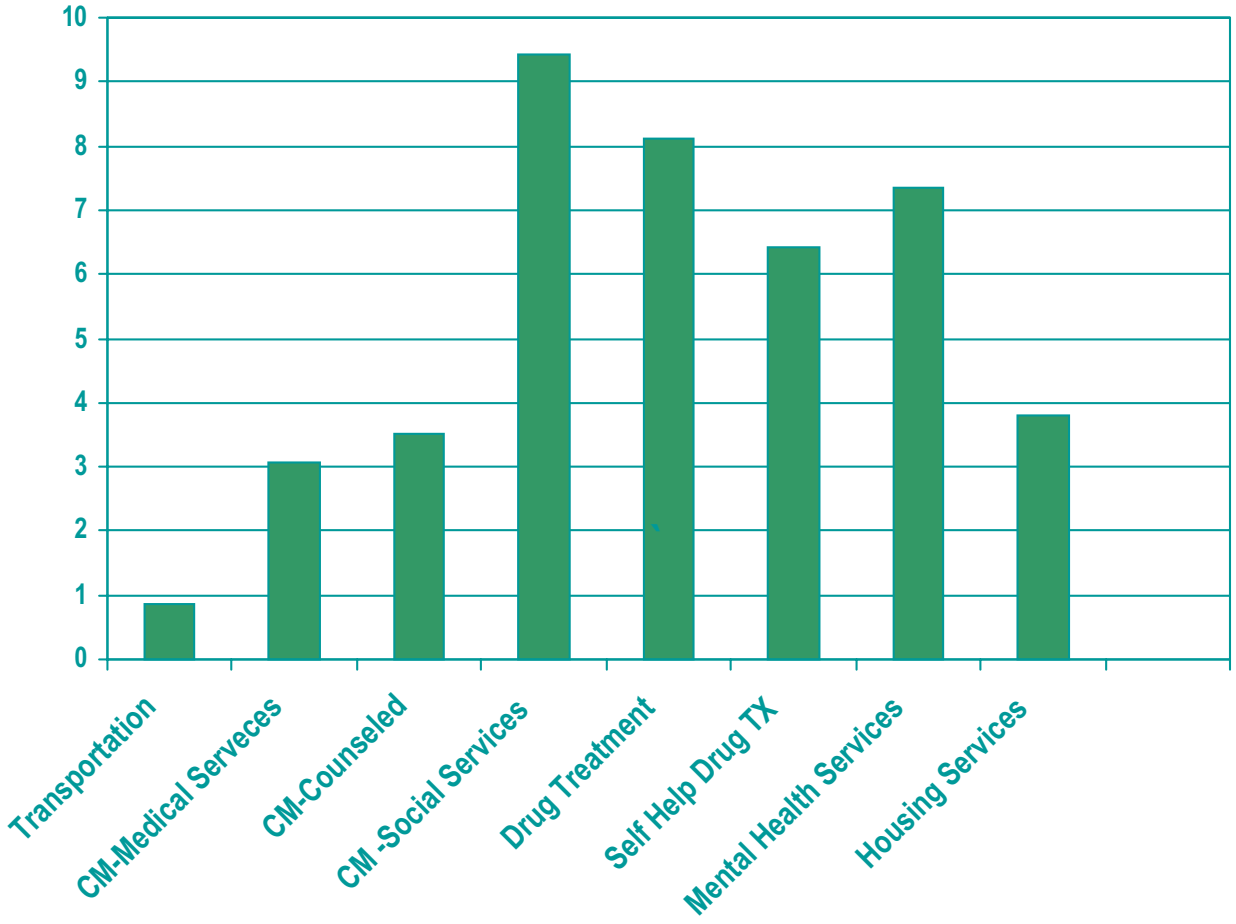
In order to examine the role of housing services in conjunction with other supportive services, we looked at four additional service areas: drug treatment, mental health services, case management and transportation. We identified CHAIN participants who reported specific needs for each service – for example, individuals who reported that they were homeless or had other housing problems the six months prior to interview were seen as in need of housing services. For case management, the high-need respondents were those who reported no regular source of medical care at the time they became aware of their HIV status. Need for mental health services was indicated by the respondent's score on a standardized measure (MOS-SF36) below an established cut-off point indicating clinically relevant systems, and consistent with diagnosis for disorder. For transportation services our analysis was restricted to respondents who reported problems in this area.

Client self-reports are the source of data on services received. Mental health services are indicated by respondents report that, in the six months prior to the interview, they received mental health services or treatment from a psychiatrist, psychologist, therapist or other mental health professional, received supportive counseling from a social worker or pastoral counselor or attended a general support group. Drug treatment services are measured as participation in a self-help group or more formal agency or clinic-based treatment services. We were able to differentiate three types of case management services. The first is *medical /referral*, or having a case manager help the client get specific medical services. The second is *social services*, based upon a respondent's reporting that a case manager developed or revised a care plan, helped the client get specific social services, periodically checked that services were being obtained, or filled out forms for benefits or entitlements. The third case management function is *counseling*, meaning reporting that a case manager provided counseling regarding personal problems, drug or alcohol use, practicing safer sex, or taking antiretroviral medications.

Although it is not specified in all cases, case management for 'social services' is very often oriented toward assisting clients with housing needs. However, receipt of housing services as such was measured by a client's report of receiving what he or she defined as, "practical assistance," from an agency based provider in response to a housing issue. Note that the CHAIN data set is limited by a lack of detail concerning different models of care and specific services received by study participants. For example, for the over-time, event history analysis, we cannot distinguish <u>type</u> of housing service so this would include any type of agency-based housing services. This could include receiving housing placement assistance or rental subsidy, securing emergency or transitional housing, or obtaining permanent housing in a scatter site apartment or congregate facility.

<u>Findings.</u> The basic findings of the event history analyses are summarized in a series of figures that follow. The graphs show the relationship between needing and receiving services and the outcome being measured (entry into care or retention in care) 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 a specific outcome, controlling for the other

Figure 1.Increasing the Odds of Entering Any Medical Care



variables in the analysis. Odds ratios greater than one indicate that the service is associated with increased entry and retention; a value of two or more represents a substantial impact.

As should be evident from these graphs, housing and supportive services demonstrate a clear and significant impact on assisting individuals to enter into and retain medical care. Our findings also provide evidence regarding the relative effectiveness of different types of services. Overall, the services displaying the greatest and most stable impact on the medical care outcomes for the CHAIN cohort are case manager referrals for housing and other social services, mental health services and direct housing services received.

Figure 1, above, shows the relationship between needing and receiving various types of services as they affect entry into medical care among those who were formerly unconnected to care at the prior interview - they did not have a regular HIV medical provider. The service with the greatest impact is case management oriented toward arranging housing and other social services. Individuals with a need for case management for social services who receive that service are more than nine times (9.4) as likely to enter into medical care as individuals with similar needs who do not receive the service. Note that case management providing medical referral or focusing on medical coordination, as well as counseling

about personal problems also increases the odds of entering medical care, but case management addressing social service needs is more important for facilitating entry into HIV primary care among the formerly unconnected. Both professional drug treatment and participation in self help groups such as AA or NA increase the odds of accessing medical care as does receiving any type of mental health service. Individuals with substance abuse or mental health needs are six to eight times more likely to enter medical care if they get appropriate supportive services as PLWH/A with these problems who do not get services that address their need.

Individuals who report housing problems are at significant risk for remaining outside of medical care. However, individuals who are unstably housed or who report other housing problems but who receive any type of housing service including rental assistance, housing placement assistance, or placement in AIDS housing, are almost four times (3.8) as likely to enter into medical care within the next six months as persons with housing problems who do not get practical help from a housing provider, despite the fact that they may have received case management services.

Figure 2 presents the analysis of the role of housing and support services for entry into medical care that meets preferred practice standards as established by the New York State Department of Health AIDS Institute. An individual can have a regular source of medical care but nonetheless not receive 'good' or appropriate care. For either provider or patient reasons, he or she might not have the

Figure 2 Increasing the Odds of Entering Appropriate Medical Care

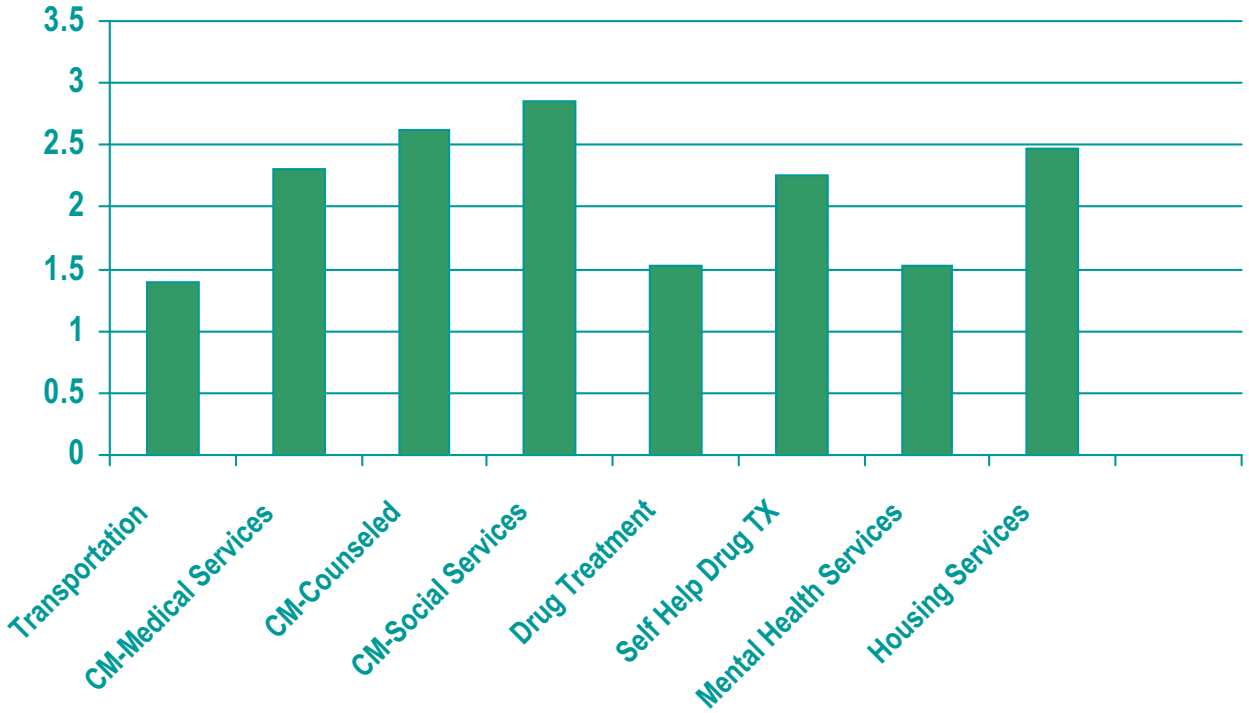
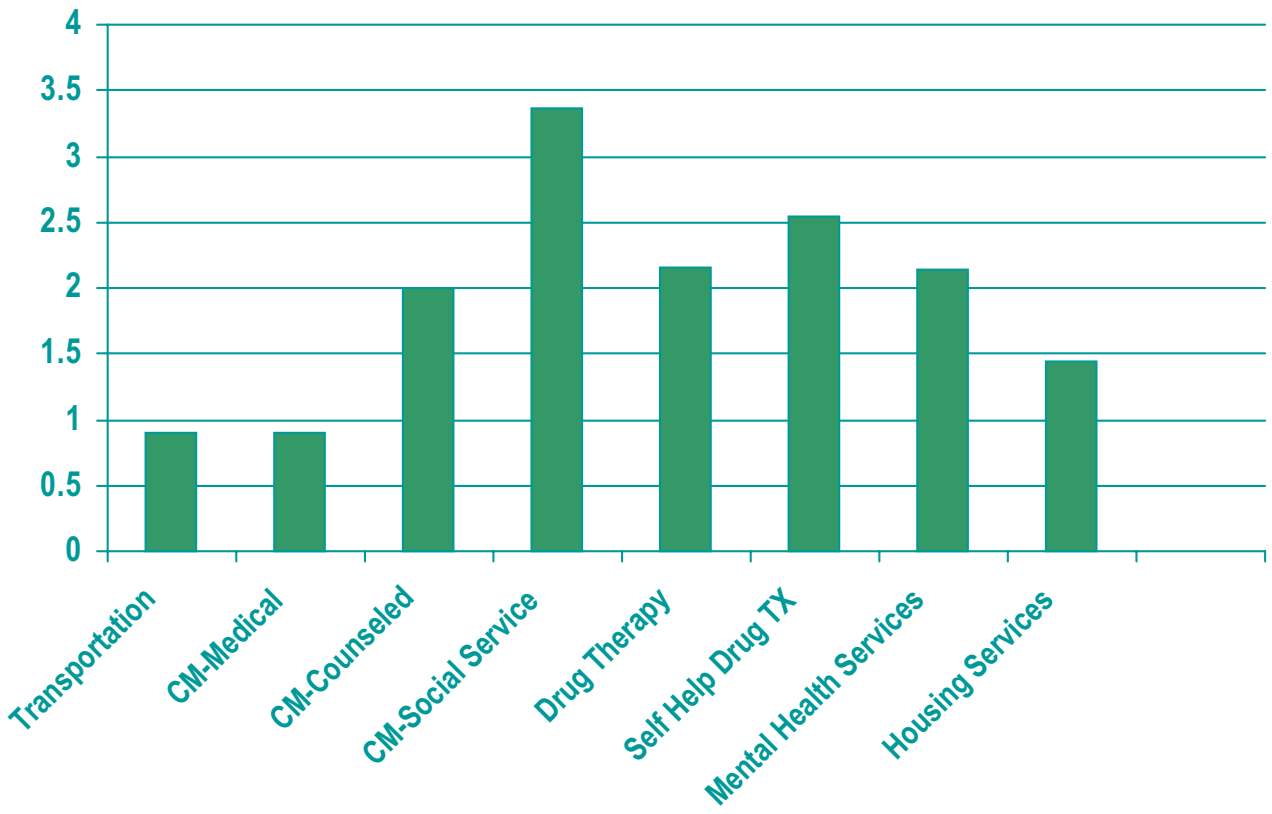


Figure 3 Increasing the Odds of Continuous, Appropriate Medical Care



recommended tests and procedures. When we examine what, if any, services predict not only finding a doctor but entering into medical care that meets preferred practice guidelines, the importance of case management is again apparent. Those who receive case management to meet social service need are about three and one-half times (3.4) more likely to enter appropriate medical care as individuals with similar needs who do not receive case management. We also see the continuing importance of drug treatment, mental health and housing services. Individuals with housing problems who receive housing services are one and one-half times as likely to enter into appropriate medical care as individuals with housing needs who don't receive the service, controlling for all the other variables in the model.

4. The Role of Housing and Supportive Services and Continuity of Medical Care

Unstable housing, substance abuse, and the absence of a regular source of medical care at time of HIV diagnosis are the strongest impediments to continued retention in appropriate medical care among CHAIN study participants (Messeri et al. 2000). Drug users and those experiencing housing problems are more likely to drop in and out of care and/or change providers often. In the next analysis, we examine the relationship between service need, services received and retention in medical care that meets preferred practice guidelines For this analysis, we started with all people currently receiving appropriate medical care and determined whether use of any supportive services increased the chances that individuals would remain in appropriate medical care at the next round of interviews (i.e., would not experience an event of leaving care).

Again we see that housing and supportive services make a difference (Figure 3 above). Individuals in need who receive any of the types of case management service (medical referral or coordination, counseling or social service planning) are over twice as likely to retain appropriate medical care as individuals with similar needs who do not receive those services. Likewise, current drug users who participate in self-help groups are over twice as likely to retain appropriate medical care as drug users not in self-help groups. Individuals who are either unstably housed or have other housing problems and who receive housing services are two and one-half (2.5) times as likely to retain appropriate medical care as those who do not receive housing services.

Summary

Findings from the CHAIN cohort study demonstrate that housing and supportive services have a clear and significant effect on facilitating individuals' entry into and maintenance of HIV primary medical care, particularly when such services are considered within the context of a service addressing a need or a problem experienced. The results of the analyses presented here, as well as more detailed analyses reported elsewhere (CHAIN Update Report #30; Messeri et al. 2000), also provide evidence about the relative effectiveness of different types of services among different subgroups of HIV-infected individuals. Overall, as illustrated in Table 4, the services displaying the greatest and most stable impact on the medical care outcomes for the CHAIN cohort are case manager referrals for housing and other social services, mental health services and direct housing services received such as rental assistance and/or housing placement.

Table 4.
Services Associated with Improved Medical Care Outcomes

Entry into Care		**Retention in Care**
Entry into care to any medical provider	***Entry into care to a medical provider who meets preferred practice guidelines***	***Continuity of appropriate medical care services***
Case management [3]	Case management [1, 3]	Case management [1, 3]
Therapeutic drug treatment	Self-help drug treatment	
Mental health services [1, 3]	Mental health services	Mental health services
Direct Housing Services [2]	Direct Housing Services [2, 3]	Direct Housing Services [2]

Notes:
[1] Greater effect of supportive services among those in need
[2] Service measured only for those who expressed a specific need
[3] Lagged effect: services received in a prior 6 month period had a positive impact at a later 6 month period

Source: CHAIN Update Report, #30

Certainly provision of housing and other supportive services can have an immediate impact on entry and retention in medical care. For example, resolution of acute housing problems or stabilization of a substance user's life upon entering drug treatment are likely to have an immediate benefit on entry into HIV care. It is also likely that securing housing and other supportive services may result in a relatively enduring alleviation of competing needs that previously interfered with engagement in medical care. One of the key questions facing policymakers is whether housing and supportive services have an effect beyond their direct impact on a problem. One can expect housing services to address needs for shelter, but can those housing services also have consequences for medical care? Supportive housing models are based on the premise that housing and supportive services can have a wider effect on access and engagement with medical care. The CHAIN study findings that housing, mental health, and drug treatment services all display a positive association with medical care outcomes strongly supports the notion of a wider, more enduring secondary effect.

Recommendations

- Continue to fund housing services through Ryan White as well as HOPWA and other HIV/AIDS housing programs and explore efforts to collaborate with other non-HIV specific funders to develop additional and housing support services. Housing is a critical but often overlooked component of ensuring access to care as well as maintaining appropriate medical care over time for persons living with HIV/AIDS.

- Housing should be combined with supportive services - especially case management, substance abuse and mental health services. Supportive housing goes beyond "bricks and mortar" to include an array of social services that, when "bundled" with housing, provides a supportive housing environment. It is this model of housing plus supportive services that facilitates client engagement with medical care.

- Facilitate service linkages. Categorical federal and other governmental funding, the structure of human service organizations at the local level as well as competition between and among service agencies can interfere with the coordinated provision of a broad array of supportive services. However, many individuals with a history of homelessness also struggle with substance use and/or mental illness. Multiple needs call for programmatic efforts that are comprehensive in strategy.

- APPENDIX -

CRITERIA FOR DETERMINING APPROPRIATE HIV MEDICAL CARE

Step	Criterion	Coded as Appropriate/Preferred Practice
1	Number of visits to primary care provider in past 6 months, Rounds 1 & 2 (pre-1996)	
		If asymptomatic = 1 visit/6 months
		If symptomatic or AIDS diagnosis = 2 visits/6 months
2	Number of visits to primary care provider in past 6 months, Rounds 3, 4, 5 (post-1996)	
		If asymptomatic, not on antiretroviral therapy (ARV) = 1 visit/6 months
		If on ARV or symptomatic or AIDS diagnosis = 2 visits/6 months
		If CD4 count < 500 and viral load > 10,000 = 2 visits/6 months
3	Specific services received from primary care provider in past 6 months	
		Minimum of one CD4 check
		Respondent reported both a physical exam and a blood test/work up

Note: Depending on time period, either steps 1 + 3 (pre-1996) or steps 2 + 3 (post-1996) have to be present to qualify for meeting preferred practice guidelines. Sources include New York State AIDS Institute "Protocols for the Primary Care of HIV/AIDS in Adults and Adolescents" (Nov 1995), the latest edition of "Criteria for the Medical Care of Adults with HIV Infection" by the AIDS Institute (Mar 1998), and personal interviews with key program staff at the AIDS Institute.