

HUD/HHS/VA Collaborative Initiative to Help End Chronic Homelessness

National Performance Outcomes Assessment

Preliminary Client Outcomes Report

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Executive Summary

Introduction

After two decades of federal and statewide planning, and numerous local initiatives, homelessness remains a problem for America. While most persons experience homelessness for only a brief period of time, an estimated one-in-ten experience chronic homelessness (Kuhn & Culhane, 1998). In partial response to the goal of eliminating chronic homelessness and to further the goal that federal agencies increase their level of collaboration, a new federal initiative, the Collaborative Initiative to Help End Chronic Homelessness (CICH) was initiated in 2004. Through this program persons experiencing chronic homelessness receive permanent supported housing and related primary healthcare, mental health services and social services (NOFA, 2003). A chronically homeless person is defined in this initiative as an unaccompanied homeless individual with a disabling condition who has either been continuously homeless for 1 year or more or has had at least four episodes of homelessness in the past 3 years,

The objective of the CICH National Performance Client Outcomes Assessment is to monitor both the use of services and client outcomes systematically and uniformly at each of the 11 participating sites to answer 4 questions: First, who was seen in the CICH initiative? Second, what changes were observed in both use of services and outcomes over the course of the initiative? Third, to what extent did service use patterns and client outcomes vary across sites and did observed variation in patterns of service use explain differences in outcomes? Fourth, did outcomes for CICH clients differ from those of a comparison sample of chronically homeless clients from the same communities who did not have access to CICH services?

Methods

Basic screening data were obtained on 1,430 potential clients, 1,242 of whom were enrolled into the program, and 734 (59%) of whom gave written informed consent to participate in the national evaluation (i.e., referred to as CICH clients hereafter). Local VA research staff administered nearly 2,400 quarterly follow-up assessments during the first years of the client evaluation (taking place between March 2004 and May 2006). This report, presents data on screening, enrollment, and both CICH client service use and outcomes during the first 12 months of program participation. Data are also presented on a comparison group, recruited for this evaluation, who did not receive CICH services. Twelve months was chosen as a cut-off point for inclusion in this report because most (80%) of the 12-month data on CICH clients has been collected – enough to provide a stable estimates of both service use patterns and client outcomes in the program. A further report will be prepared after all data is collected for both CICH client and comparison group subjects..

Results

At the time of program entry, CICH clients had been homeless an average of 8 years in their lifetimes; 72% had substance abuse problems; 76% had mental health problems, and 66% reported medical problems (Table 4).

Of the six core services targeted for CICH clients, the proportion of these services received by individual clients, including both housing and healthcare services, increased from an average of 64% at baseline to 78-81% during the following 12 months (Table 7).

The average number of days housed in the previous 90 days increased dramatically from 18 at baseline, to 68 at the 3-month follow-up, and rose steadily

thereafter to 83 at the 12 month follow-up (Table 7). Mean monthly public assistance income increased steadily from \$316 at baseline to \$478 one year later, a 50% increase. Significant improvements of modest magnitude were also observed in overall quality of life, mental health functioning, and reduced psychological distress. Alcohol and drug problems remained largely unchanged over time. Total quarterly health costs declined by 50%, from \$6,832 at baseline to \$3,376 at 12 months.

Measures of service use that were most strongly associated with client outcomes, among 19 measures examined, showed that improved coordination of services and positive relationships between clients and their primary mental health/substance abuse treater (the therapeutic alliance) were the strongest predictors of positive outcomes (Table 16, columns 10 and 18).

Comparisons of overall group differences and of rates of change between CICH clients and a similar comparison group of homeless clients who did not receive CICH services, at five of the sites, provide evidence that CICH increased access to housing, to primary providers of both physical health and mental health care, to community-based case management, and to a more integrated “package” of housing and supported services. (Table 18).

Perhaps because they were provided with a fuller array of services, CICH clients showed substantially greater improvement in the mean number of days housed (14 days at baseline to 81 days at 12-months for CICH clients vs. 17 to 50 days among comparison group subjects). Similar differences are observed in mean monthly public support income (\$317 at baseline to \$484 at 12-months for CICH [a 53% increase] vs. \$327 to \$408 [a 25% increase] for comparison group subjects)(Table 18).

Conclusion

These preliminary findings suggest that a diverse population of chronically homeless adults with disabling conditions can successfully be housed and can maintain their housing when provided with a mix of permanent housing, intensive case management, and access to primary physical health services, mental health services, and substance abuse treatment. The CICH initiative has thus largely met its objectives for service delivery and outcomes in reaching out to a highly vulnerable population.

Introduction

The problem of chronic homelessness

It has been estimated that 637,000 persons in the United States experience homelessness in any given week, and 2.1 million persons experience homelessness in a given year (Burt et al, 2001). While most of these persons experience homelessness for only a brief period of time, an estimated one-in-ten (10%) have experienced chronic homelessness, defined as those who experience homelessness characterized by either greater duration or more frequent of episodes (Kuhn & Culhane, 1998). Many of the estimated 150,000-200,000 persons experiencing chronic homelessness appear to have disabling health and or behavioral health problems (NOFA, 2003; SAMHSA, 2003). An estimated 40% of chronically homeless individuals have substance abuse problems, 25% have a disabling physical health problem, and 20% have a serious mental health problem (Culhane et al, 2001).

Federal response

The major legislative impetus for federal agencies addressing the problem of homelessness, and more recently chronic homelessness, is the Stewart B. McKinney Homeless Assistance Act of 1987 (P.L. 100-77) – known today as the McKinney-Vento Act. The Act, and amendments added in 1988, 1990, 1992, and 1994, include provisions designed to provide primary health care and mental health care for homeless Americans, and has encouraged diverse federal agencies to develop targeted service programs over the past 20 years. To encourage federal leadership in addressing the problem of homelessness, the Act established the U.S. Interagency Council on the Homeless (now

the Interagency Council on Homelessness), which is currently comprised of the heads of 13 federal cabinet departments (Housing and Urban Development (HUD), Agriculture, Commerce, Defense, Education, Energy, Health and Human Services (HHS), Homeland Security, Interior, Justice, Labor, Transportation, and Veterans Affairs (VA)), as well as affiliated agencies (General Services Administration, Social Security Administration, United States Postal Service, Office of Management and Budget, USA Freedom Corps, and the White House Office of Faith-based Community Initiatives) (ICH, 2006).

Collaborative Initiative to Help End Chronic Homelessness (CICH)

In response to the goal of eliminating chronic homelessness, and the request that federal agencies increase their level of collaboration to accomplish this goal, members of the Interagency Council developed a new federal initiative entitled, Collaborative Initiative to Help End Chronic Homelessness (CICH). Through this program, persons experiencing chronic homelessness receive permanent supported housing funded by HUD, and supportive primary healthcare and mental health services provided by the Health Resources Services Administration (HRSA), the Substance Abuse and Mental Health Services Administrations (SAMHSA) of DHHS, and by the Veterans Health Administration (VHA) of VA (NOFA, 2003). A chronically homelessness person is defined, in this initiative, as “an unaccompanied homeless individual with a disabling condition who has either been continuously homeless for 1 year or more or has had at least four episodes of homelessness in the past 3 years”.

The key components of the CICH intervention involve: 1) providing comprehensive primary health, mental health, and substance abuse treatment services

linked to housing; 2) creating additional permanent housing; 3) increasing the use of mainstream resources that pay for services and treatment for this population; 4) replicating service, treatment and housing models that have proven to be effective (e.g. Stein & Test, 1980; Tsemberis & Eisenberg, 2000); and 5) supporting the development of infrastructures that sustain the housing, services and treatments and interorganizational partnerships beyond the designated CICH funding period.

Out of the more than 100 communities that applied for CICH funds, 11 were selected in October 2003 to receive funding. Funding varies by federal agency and types of service provided. HUD provided 5 years of funding to those sites with Shelter Plus Care programs and 3 years of funding to sites implementing Supportive Housing Programs. DHHS provided funding for 3 years for substance abuse, mental health and primary care services. The 11 communities included Chattanooga, TN; Chicago, IL; Columbus, OH; Denver, CO; Ft. Lauderdale, FL; Los Angeles, CA; Martinez, CA; New York, NY; Philadelphia, PA; Portland, OR; and, San Francisco, CA.

Each of these communities (sites) developed a comprehensive plan to end or reduce the prevalence of chronic homelessness in their community through the development of sustainable, cost-effective partnerships among providers in the private and public sector. The specifics of these plans vary across communities but each plan includes strategies for providing permanent housing, linking comprehensive supports with housing, increasing the use of mainstream services, integrating systems and services, and, ensuring the sustainability of these efforts beyond the funding period. A brief summary of programmatic efforts at each site is presented in Table 1 (National Technical Assistance Center [NTAC], 2006)

National Performance Outcomes Assessment of CICH Client Outcomes

The three federal agencies sponsoring the Initiative (HUD, DHHS & VA) enlisted the VA Northeast Program Evaluation Center (NEPEC) to conduct a national evaluation of CICH client outcomes to monitor the implementation and effectiveness of the \$55 million Initiative (\$35 million funding in 2003, with \$20 million added in subsequent years) by using a common evaluation methodology across all 11 sites.

The goal of the national evaluation is to provide a site-by-site description of program implementation, as well as descriptive information on clients served; services received; longitudinal housing quality, stability, and satisfaction; and, client outcomes in health and functional domains. Outcome data from the evaluation were provided to the sites throughout the implementation of the program to guide program development, and have been provided quarterly to allow ongoing monitoring of service delivery and outcomes. Monthly site-level statistics were provided to local CICH grant recipients on the implementation of evaluation procedures as well as to federal sponsors, beginning in May 2004, and updated longitudinal client outcome statistics were provided beginning in January 2005 every 3 months. These data will also form the basis for the evaluation of program accomplishments after it is completed.

This report presents data on both services and client outcomes from the first two years of CICH program operation. It also establishes the definitions of measures and general format of analyses for the final summary report, and addresses the following series of related questions:

- First, who was seen in the CICH initiative including: a) how did those screened differ from those who were enrolled in the program, and how did

those who enrolled differ from those who participated in the full outcome evaluation, i.e., CICH clients; and, b) how did CICH clients differ across the sites. “Enrolled” participants were individuals who CICH program staff indicated as “receiving permanent housing and/or case management/supportive services” on the CICH Screening Form.

- Second, what changes were observed in both use of services and outcomes over the course of the Initiative? Since 28% of clients were already housed at the time of baseline assessment we consider the relationship of housing status at the time of the baseline assessment to subsequent changes in housing and other outcome measures. While the protocol for the national evaluation was to administer baseline assessment interviews before clients were placed into housing, this was not always possible, especially true at sites where clients were typically placed into SRO housing (e.g., Los Angeles and San Francisco) or more centralized locations (e.g., Columbus and Denver) making it easier for program staff to place a larger number of clients into housing more quickly than VA research staff were able to recruit clients into the evaluation.
- Third, we examine differences in outcomes across sites and their relationship to baseline characteristics and site differences in patterns of service delivery.
- Finally, we consider how outcomes observed in the Initiative differed from those of similar clients recruited from other programs serving the

homeless at a subset of sites, who did not have access to the services available through the CICH program.

Methods

Sample

CICH clients (Treatment group)

During the first two years of program operation (i.e., through April 2006), 1,430 homeless people were formally screened for enrollment in CICH, with substantial variation between sites ranging from 49 in Ft. Lauderdale to 476 in Martinez (Table 2). Of these, 1,242 (87%) were identified as having been enrolled into the CICH clinical program, with enrollments rates ranging from 38% in New York to 100% in Denver, Ft. Lauderdale and Philadelphia. All of those enrolled into CICH were to be invited to participate in the national evaluation. Among the 1,242 enrolled into the program nationally, 734 (59%) gave written informed consent to participate in the national evaluation, again with substantial variation across sites ranging from 11% in Martinez to 98% in Ft. Lauderdale. All those who provided written informed consent participated in data collection for the national evaluation.

Participation in the national evaluation was completely voluntary, and did not influence receipt of housing or services provided through the Initiative. Informed consent procedures were approved by Institutional Review Boards (IRBs) at the parent site and at each participating site.

Usual care individuals (Comparison group)

During the second year of the program, from February 2005 through March 2006, a group of 118 comparison group subjects were recruited from five CICH sites: Chattanooga (N=19), Los Angeles (N=18), Martinez (N=32), New York (N=25), and Portland (N=24). Research staff at each of these sites were able to identify one or two portals of entry into existing housing, case management or supportive services programs serving chronically homeless persons in the same local area served by the CICH program.

The portals of entry for participating sites are identified below:

Chattanooga: Chattanooga Department of Health's Homeless Health Care Center

Los Angeles: Edward and Rossmore Skid-Row SRO hotels

Martinez: Multi-service center of one of the CICH partnering agencies in Richmond

New York: Project Renewal East 3rd Street shelter in Manhattan

Portland: JOIN, the homeless outreach center which referred most individuals into the CICH program, and St. Francis dining hall, where many of the homeless in Portland eat and get mail

Local research staff, in cooperation with the staff of the housing and homeless service provider portals of entry identified above, recruited a convenience sample of chronically homeless adults in each of these communities that were intended to be socio-demographically and clinically similar to CICH clients (based on local research staff's experience recruiting CICH clients during the prior year), yet who were receiving some lesser combination of permanent housing, intensive case management, and access to healthcare services provided to CICH clients. Thus, comparison group subjects were intended to be chronically homeless adults receiving "usually available" housing resources and supportive services in each of the five communities.

The recruitment of a comparison group was approved by the same local IRBs which approved the recruitment of CICH clients to participate in the national evaluation. Written informed consent was provided by all comparison group subjects, who received the same remuneration of \$15 per interview as CICH client subjects. Also, the same baseline and follow-up assessment forms and data collection procedures were used for both groups.

The remaining six CICH sites were unable to recruit comparison group samples due to local IRB, research staffing, and homeless service provider issues/challenges.

Data collection

Client data were collected by full-time VA employees serving as “evaluation assistants,” one at each site. These evaluation assistants were responsible for recruiting participants, collecting screening/intake forms completed by case managers, and administering baseline assessment interviews at entry into the formal program evaluation, along with quarterly follow-up assessment interviews for up to 3 years. Follow-up interviews were to be administered regardless of clients’ housing or treatment status i.e., evaluation assistants were to continue the administration of follow-up interviews to clients who remained engaged in treatment, as well as those who discontinued participation in either housing or case management services throughout the Initiative.

Data collection began at the start of program initiation at each site, from March – August 2004, and is intended to continue through September 2007. The data presented in this report were collected from the start of the project through mid-May, 2006, and represent 97% of all anticipated 3-month data, 93% of 6-month data, 88% of 9-month

data, and 81% of all 12-month data to be collected. Thus we have limited 3-year data, but have nearly complete 1-year outcome data that have been collected and are available for presentation in this preliminary report.

Because comparison group recruitment began approximately one year after CICH client recruitment and lasted an average of 6 months (range 2 months in New York to 12 months in Martinez), we extended the data collection “cut-point” from mid-May 2006 to early November 2006 when comparing the two groups to provide enough 9 and 12-month follow-up observations for preliminary multivariate analyses of longitudinal patterns of service use and outcomes during the first year of CICH program operation.

Measures. A brief set of individual characteristics were measured through a structured screening form administered at first contact, prior to enrollment into the program. This form also recorded the date of enrollment in the program.

Further data were obtained during the baseline interview among those who agreed to participate in the evaluation. These data were collected to allow comparisons between people screened but not enrolled into the program and those who were enrolled, both program-wide and at each participating site, as well as a comparison of enrolled clients who did and who did not give consent to participate in the evaluation.

Due to the intensive and comprehensive nature of the Collaborative Initiative and the heterogeneity of the target population, an extensive array of service use and client outcome measures were chosen to document the diverse processes and outcomes of the program.

Receipt of four types of services typically needed by chronically homeless people were documented: primary health care services, mental health & substance abuse treatment, case management, and the overall integration of service delivery. The following seven client outcome domains were examined: housing status, community adjustment, mental health status, substance use, physical health status, income, and health care costs.

A brief explanation of each of these measures follows.

Individual characteristics

CICH intake and outreach staff completed a structured form on each person screened, which documented: 1) basic socio-demographic information (i.e., age, gender, and race/ethnicity); 2) eligibility characteristics (i.e., single individual vs. parent, and type of chronic homelessness experience – a current episode of homelessness lasting a year or longer vs. 4 or more episodes of homelessness during the past 3 years); 3) each of three disabling condition(s) (i.e., mental health, substance abuse or medical) identified at screening and confirmed by evaluation staff by clarifying those conditions noted by clinicians at screening with program intake staff and by asking clients during the baseline assessment interview; 4) outreach location and the agency initiating outreach; 5) outreach clinician observations of clinical problems; 6) response to early interactions with intake/outreach staff; and, 7) date enrolled into the program (if applicable). Measures of time (days) from screening to enrollment (among those enrolled into the program), and time from enrollment to the baseline assessment interview (among CICH clients) were also documented.

Supplemental socio-demographic and clinical information (e.g., veteran status, disabling condition(s)) were collected following written informed consent, along with service use and client outcome data.

Service Use

Primary health care services

First, CICH clients were asked whether they had a “usual health care provider”, and whether they had health insurance?

Then the number of routine, preventive healthcare procedures received during the past year was assessed from a list of 12 gender-neutral procedures, plus either four male-specific procedures or two female-specific procedures (Gelberg, 2003). Examples of gender-neutral procedures include measurement of height, weight, blood pressure, cholesterol, hearing and vision, testing for diabetes, tuberculosis, hepatitis, and routine dental care. Male-specific procedures included prostate exam, rectal exam, colonoscopy, and PSA testing. Female-specific procedures included PAP testing and breast exam.

Clients reporting unhealthy behaviors were also asked the number of such behaviors that they had discussed with a healthcare professional during the previous year. These behaviors included drinking alcohol among drinkers, smoking among smokers, and diet/nutrition among those who were obese at baseline.

The total number of outpatient medical visits made during the past 3 months was also included as a primary health treatment measure.

Finally, the trust in physician scale (Anderson & Dedrick, 1990), an 11-item measure, was used to assess the level of trust felt by a patient with his/her primary doctor/physical healthcare provider. Item responses range from 1=totally disagree to 5=totally agree. The scale score is computed as the mean response to these 11 items, with a higher score reflecting greater trust felt by CICH clients and their primary provider (alpha=.91). Sample items include: “My health care provider is usually

considerate of my needs and puts them first”, “I trust my health care provider so much that I always try to follow his/her advice,” and “If my health care provider tells me something is so, then it must be true”.

Mental health services and substance abuse treatment

Clients were further asked whether they could identify a primary mental health or substance abuse treatment provider, as well as the total number of outpatient mental health visits and the total number of outpatient substance abuse treatment visits received during the previous 3 months. A fourth measure addressed participation in self-help groups (i.e., Alcoholics Anonymous or Narcotics Anonymous)

A 7-item therapeutic alliance scale was used to measure the strength of the therapeutic relationship experienced by CICH clients with their primary mental health or substance abuse provider (Neale & Rosenheck, 1995). Scale scores range from 0 to 5 reflecting greater strength of relationship, and were calculated as the average response to the 7 items ($\alpha=.94$; $\text{mean}=4.4$; $\text{range } 0-6$). For example, clients were asked, “How often does your provider perceive accurately what your goals are?”, and “How often are the goals of your work with your provider important to you?”.

Finally, clients’ experience of personal choice in selecting mental health or substance abuse services was measured using a 5-item “consumer choice” scale (Monahan et. al., 2005), which was computed as the average response ($\alpha=.89$; $\text{mean}=4.0$; $\text{range}=1-5$), ranging from 1=strongly disagree to 5=strongly agree, with higher scores reflecting greater client choice. The scale included the following items: 1) I felt free to do what I wanted about going for treatment; 2) I chose to go for treatment; 3)

It was my idea to obtain treatment; 4) I had a lot of control over whether I went for treatment; and, 5) I had more influence than any one else on whether I went for treatment.

Case management

Clients were also asked whether they could identify a primary case manager, and whether they were visited by a case manager in a community setting (i.e., either at home or at some other place in the community other than a service agency or healthcare facility setting) during the previous 3 months.

Clients were further asked whether they had a money manager (“a person or organization which helps you manage your money”) and whether they had had any contact with their landlord, either in-person or by telephone, during the past 3 months? Money management has been identified as an important ingredient in the approach to helping homeless people developed by Tsemberis and colleagues (2000) – and landlord-tenant relationships have been found to be associated with housing outcomes among persons with mental health and/or substance abuse problems (Kloos et. al., 2002).

Services integration

Both objective and subjective measures were used to evaluate the integration or coordination of diverse CICH services. Services integration is defined here to be the extent to which the key components characterizing the CICH intervention (listed below) were provided to clients. An objective measure of overall services integration was based on calculation of the proportion of total component services received by clients using a

series of six dichotomous service component measures including: 1) independent housing 2) case management, 3) general medical care, 4) substance abuse treatment, 5) mental health services, and 6) VA services. If the client did not have need of a particular service or was not eligible to receive VA services, the score for that particular item was coded as missing. Scores on non-missing values were averaged and the total ranged from 0 to 100%, with a higher score representing more fully integrated service delivery (overall mean at baseline=.64; sd=.23).

A second objective measure of overall service delivery represented the total number of outpatient health visits of all kinds received during the previous 3 months. This measure was calculated as the sum of medical visits, mental health visits, and substance abuse treatment visits. Clients were further asked to estimate the total number of different individual service providers assisting them during the past 3 months.

To supplement these objective measures, a 5-item subjective scale was developed to measure the extent to which the delivery of these services was perceived to be well coordinated or fragmented. The five component items included one which asked about the coordination of services (“How often do providers work together to coordinate your care?”), and four which addressed fragmentation (i.e., “How often is one provider unaware of information about your care that another provider has?”, and “How often do these providers seem unaware of what the others are doing for you?”, and “How often do you have to tell the same information to several providers?”). The response set to these items was 0=rarely, 1=sometimes, and 2=often, and the scale score is the average response across the 5 items, after recoding fragmentation items so that higher scores

reflect a higher degree of coordination of services and less fragmentation ($\alpha=.80$; mean=1.3; range=0-2 over all time points).

Client outcomes

Housing

The primary goal of the Collaborative Initiative was the rapid and sustained placement of chronically homeless people into long-term housing. Clients were asked at each interview the number of days during the past 3 months that they were housed in each of nine settings, as well as where they were residing at the time of each assessment. The number of days housed was defined as living in their own place, someone else's place, or in an SRO hotel or boarding home. SRO hotels were considered residences because some sites used such housing as the primary housing resource for CICH clients (e.g., Los Angeles and San Francisco). Nights spent in shelters, outdoors, or in vehicles or abandoned buildings were classified as representing "homeless" housing status.

Clients who were living in their own places were also asked to report their level of satisfaction with their housing using a 20-item housing satisfaction scale developed by Tsemberis and colleagues (2003), as part of the SAMHSA Supported Housing Initiative (CMHS, 2001). Responses to these items ranged from 1=very dissatisfied to 5=very satisfied, so the higher the score, the greater the satisfaction with housing. The scale score was calculated as the mean of the responses to these 20 items ($\alpha=.89$). Sample items include, "The amount of choice you had over the place you live", "How close you live to family and friends", "The safety of your neighborhood", and "The amount of privacy you have".

Community adjustment

To evaluate how well CICH clients were integrated into and engaged in community life, they were asked whether they had participated in each of 16 common activities (e.g., visiting with close friends/relatives/neighbors, going to a grocery store, restaurant, retail store, bank, movie, library, park, or reading a newspaper) during the previous 2 weeks (Katz, 1963). A “community involvement” scale was then calculated as the total number of these activities, and ranged from 0 to 16, with a higher score indicating greater participation in community activities.

Social support networks were assessed by questions asking the number of types of persons who would be available to help them about three different types of assistance: a short-term loan of \$100, a ride to an appointment, or someone to talk with if they felt suicidal (Vaux et. al., 1987).

Additional single-item measures addressed a) whether clients knew any of their neighbors well, b) the number of days spent in jail during the past 3 months, and c) satisfaction with life overall (subjective quality of life), scored on a 7-point terrible=1 to delighted=7 scale, with a higher score indicating greater satisfaction with life. (Lehman, 1988).

Income

CICH client income was expected to rise as a result of participating in the program, both through increased access to public support benefit payments and through employment. Clients were asked whether they had received any of several types of public support income during the past month, and if so, the amount of such income.

Information on days of employment and employment income were also obtained, along with informal types of income. Responses to these items were summed to create a measure of total income.

Mental health and physical health status

The Medical Outcomes Study Short Form (SF)-12 mental health subscale (Ware et. al., 1998), three subscales from the Brief Symptom Inventory (BSI) (Derogatis & Spencer, 1982), and an observed psychotic behavior rating scale (Dohrenwend, 1982) were used to evaluate mental health status. The SF-12 mental and physical health subscales assess the overall level of functioning in their respective domains, with scores ranging from 0 to 100, and a score of 50 representing normal level of functioning in the general population. Each 10 point-interval represents one standard deviation (above or below) the general population norm.

Three BSI subscales were used reflecting major domains of subjective distress: psychoticism (e.g. hallucinations, delusional beliefs, disorganized thinking), depression, and anxiety. The BSI score presented in this report is the mean value for these three subscales, ranging from 0=never experience symptom to 4=very often experience symptom.

Finally, a measure of observed psychotic behaviors included 10 types of psychotic behavior observable by evaluation staff during the course of baseline and follow-up interviews (e.g., auditory or visual hallucinations, delusions, agitation/aggression, inappropriate behavior or speech, incoherent speech). Each of these behaviors was coded 0=not at all to 3=a lot, based on staff observations, and the total scale score was

computed as the average score across these 10 items ($\alpha=.76$; $\text{mean}=0.2$; $\text{range}=0-2.6$ over all time points).

Substance abuse

Items from the Addiction Severity Index (ASI) documented the number of days each client drank to intoxication and whether they had used any illicit drugs during the previous month. Alcohol and drug sub-scales (McLellan et. al., 1980) measured alcohol and drug use problems using multiple items combined in a standard comparable score ranging from 0 to 1, and which included items such as, “Do you feel like you have a problem with alcohol now?”, “How many days in the past 30 have you experienced drug problems?”, and “How troubled or bothered have you been in the past 30 days by your own alcohol/drug problems?”. A higher score on an these ASI sub-scales reflects a greater, more serious substance use problem.

Service costs

Service costs were estimated for four aggregated types of care: medical/dental treatment, mental health services, substance abuse services, and the total for all three types of services. These estimates were computed by multiplying the number of visits/days of care reported by standard estimates of the unit cost of each type of care. Unit costs were estimated on the basis of data average unit cost data compiled for a recent NIMH funded cost effectiveness study of treatment of schizophrenia (Rosenheck et. al., 2006) as follows:

- Inpatient medical = \$1,866; emergency room medical = \$96; outpatient medical = \$70; dental = \$50
- Inpatient mental health = \$1,059; emergency room mental health = \$86; outpatient mental health = \$82; day hospital mental health = \$329; drop-in mental health = \$82; consumer support mental health = \$16
- Inpatient substance abuse = \$435; emergency room substance abuse = \$86; outpatient substance abuse = \$25; residential treatment for substance abuse = \$40; AA/NA = \$16

For example, if during the previous 3 months a CICH client reported spending three days in the hospital, two days in the emergency room, and had six outpatient visits for a physical health problem, and one dental visit, then his/her medical/dental quarterly service cost for that quarter would have been \$6,260 $((3*\$1,866) + (2*\$96) + (6*\$70) + (1*\$50))$.

Total health costs were also sub-grouped across types of service into inpatient and outpatient costs. Inpatient costs were calculated as the sum of the following five service costs: inpatient medical, mental health, substance abuse, day hospital, and residential treatment. Outpatient costs were similarly calculated as the sum of each of the various types of outpatient costs multiplied by their unit costs listed above.

Statistical Analysis

Characteristics of those screened, enrolled in the program, and consenting to the evaluation

Basic demographic and clinical characteristics of all individuals screened for possible enrollment into the program are presented, for both the entire sample and for each site. Analysis of variance and chi square tests are used to identify the significance of differences in individual characteristics across sites at screening.

Next, demographic and clinical characteristics of individuals *screened* but not *enrolled* into the project are compared with those of individuals who enrolled in the project and with those who gave consent to participate in the evaluation, again using data from the screening form with the significance of differences evaluated by chi-square and independent samples t-tests.

We next present baseline characteristics of all CICH clients participating in the evaluation with a comparison of differences across sites, using data obtained from the baseline interview. The significance of differences across sites were evaluated using one-way analysis of variance (ANOVA) and chi-square tests.

Service use and outcome: Change over time

Repeated measures mixed regression models then were used to identify changes in service use and client outcomes. Mixed model linear regression is a statistical technique used to analyze longitudinal outcome data in which follow-up observation data points are not independent (i.e. they are correlated because they pertain to the same individual/client). Thus, a distinctive feature of these models is that they adjust the

standard errors, the spread of follow-up data around the group mean for the correlation of data within individual clients (Bryk & Raudenbush, 1992).

The mixed linear regression models used in this report generally included one or more class variables, representing time (e.g., baseline, 3-month, 6-month, 9-month...follow-up) and client sub-groups of interest (e.g., housed at baseline vs. not housed, male vs. female, etc.). They also included one or more covariates representing potentially confounding baseline characteristics (e.g., site or client socio-demographic characteristics bivariately associated with service use and outcomes measures, including the baseline values of client outcome measures). We present least square means which are adjusted for these covariates. Some mixed regression models examined the main effect of time alone, while others examined the 2-way interaction effect of time and various client sub-groups. Main effect statistics representing time are used to determine whether there was significant change in a given measure over the period of the evaluation, while interaction statistics compare patterns of change over time between client sub-groups (e.g., whether clients housed at baseline or other subgroups showed a greater or lesser rate of improvement over time than other participants).

Two sets of mixed models were developed. The first set of models was developed to examine changes in the use of services and in client outcomes over the 12-month follow-up period for all evaluation subjects, without considering whether they were housed at baseline or not. For each measure, a single class variable represented the main effect of time and was coded 0 for the baseline observation, and 1 through 4 for 3-month, 6-month, 9-month, and 12-month observations, respectively. Covariates used included 10 site dummy codes to adjust for site effects for all service use and outcome

measures. Covariates used with client outcome measures also included the baseline value of the measure, and 11 eligibility and baseline socio-demographic characteristics. Least square means, adjusted for covariates and site effects are reported for each time point. Statistics indicating whether significant trends (upward or downward) were observed among measures of service use and client outcomes over time are also reported.

Mixed models with weighted observations (marginal structural models) were used to examine the possible influence of attrition (loss to follow-up) on service use and outcomes (Robins & Finkelstein, 2000). Logistic regression was first used to model successful follow-up at each time point, using the set of 11 eligibility and baseline socio-demographic characteristics to estimate the predicted probability that each interview would be completed. Observations were then weighted by the inverse of the predicted probability that they would be completed so that interviews completed with people whose baseline characteristics suggest a low probability of follow up were given more weight than those more likely to be completed.

A second set of mixed regression models is presented to determine the extent to which housing status at baseline or other baseline characteristics were significantly associated with changes in service use and/or outcomes over time. In these analyses housing status at baseline was added as a second class variable, coded “1” for clients housed at baseline and “0” for others. Baseline housing status, group, and group x time interactions were both examined. Baseline differences between the housed and not housed groups identified as significant on bivariate analyses (using ANOVA analyses) were included as covariates. Least square means for each time point, for each housing

status group, are reported, along with fixed effect statistics representing the significance of the interaction of housing group and time.

Site differences in service use and outcomes

Differences in patterns of service use and outcomes across sites were evaluated using mixed models that included main effect for site, for time, and a term presenting site by time interaction.

To determine whether the differences in patterns of service use account for the differences in outcome across sites, we re-tested the significance of differences in outcomes across sites including measures of service use as covariates.

Group differences in baseline characteristics, service use and outcomes between CICH clients and comparison group clients.

Bivariate differences on over 250 baseline characteristics between CICH client subjects (N=296) and comparison group (N=118) subjects at the five comparison group CICH sites were evaluated using independent samples t-tests. Significant differences between the two groups were found on 80 of the 253 baseline characteristics examined. Descriptive statistics were then run on these 80 baseline measures among the combined sample of CICH clients and comparison subjects (N=414) to identify measures having larger amounts of missing data. Eleven measures were found to have fewer than 380 observations, due largely to skip patterns within the baseline assessment form, and were therefore excluded from subsequent logistic regression analyses. Sixteen other baseline measures were also excluded due to redundancy with other variables. Logistic

regression was then used to select a smaller, more parsimonious set of baseline covariates among the remaining 53 bivariately significant measures to be included in subsequent multivariate mixed model analyses. The 53 baseline measures were entered as a single block of independent variables, with group (coded as 1=CICH client, 2=comparison group subject) as the dependent variable. The stepwise method of selection was used, both forward and backward.

The stepwise forward selection method identified 10 measures in the final model. When stepwise backward selection method was used, the same 10 measures were identified along with four additional measures, for a total of 14 baseline covariates. These covariates included category of chronic homelessness (i.e., experiencing 4 or more episodes of homelessness during the previous 3 years); race/ethnicity (i.e., Asian/Pacific Islander); work history (i.e., primarily unemployed during the previous 3 years); access to healthcare (i.e., having health insurance and a usual source for medical care, and the total number of healthcare providers); mental health diagnoses (i.e., bipolar or anxiety disorder, and total number of mental health and substance abuse diagnoses); receiving supportive services (i.e., housing, vocational rehabilitation, case management visits in the community); number of days hospitalized; and, spirituality. On most measures comparison clients have less severe health problems and better community adjustment.

Multivariate mixed models were then used to evaluate differences between CICH and comparison clients in service use and client outcomes during the first 12-months of CICH program, as described earlier. The class variables in these mixed models included group, time, and the group*time interaction. Covariates included the baseline value of

the dependent variables, four site dummy codes (with New York being the reference site), and the 14 baseline covariates identified above.

Results

Characteristics of individuals screened for CICH

Collaborative Initiative staff at the 11 sites screened a total of 1,430 persons for possible enrollment into the program, with substantial variation across sites (e.g. 49 at Ft. Lauderdale, 72 at Philadelphia, 146 screened at Los Angeles and 476 at Martinez (Table 2). On average 130 persons (sd=118) were screened per site. While each site was asked to complete a client screening form for each person evaluated for enrollment into the program, the implementation of screening procedures varied across sites. Differences in screening procedures most likely reflected differences in local goals and circumstances and most likely account for the variation observed in both the number of persons screened, the proportion of people screened who were enrolled into the program, and the numbers and proportions of those enrolled who participated in the evaluation.

Comparisons of individual characteristics of people screened across sites are notable. For example, at Chattanooga, Ft. Lauderdale, Martinez, and Portland a higher proportion of Caucasian (non-minority) persons were screened as compared with Chicago, New York and Philadelphia (Table 2). Whether this result is due to a higher proportion of Caucasians living in these areas or some other reason is not known.

Perhaps the most salient difference in target populations observed across sites was in the area of major diagnostic groups. New York, and to a lesser extent Chicago and Martinez, primarily screened individuals with substance abuse problems, in contrast to Ft.

Lauderdale, Chattanooga & Columbus, which primarily screened those with mental health problems (Table 2).

Statistically significant bi-variate differences across sites were found on 44 of 48 screening measures. For this reason, as noted above, ten site dummy codes (coded as 0 or 1) with one site excluded as the reference condition, were included in subsequent models.

Overall, among those screened, the average age was 45 years, 74% were men, 45% were Caucasian, they all were individuals caring for themselves alone (i.e., no families were screened), and 69% had been homeless for over a year, with an additional 31% having experienced 4 or more episodes of homelessness within the past 3 years. Most of those screened had a substance abuse problem (77%) or a mental health problem (60%). About one-third of those screened had one or more disabling medical condition(s). Half of screening/outreach contacts occurred in a shelter or mission (26%), or on the streets or some other outdoor location (25%). Outreach activities were more often initiated by homeless service providers participating in the local CICH Collaborative (51%), than by the staff of the lead agency (27%) or through referrals by other agencies (10%). When approached by Collaborative outreach staff, nearly two-thirds of those screened (63%) expressed interest in receiving permanent housing and supportive services provided through the program.

Of those screened, all but 13% were subsequently documented to have been enrolled into the program (Table 2, third row from the bottom). Half of those screened (51%) both enrolled into the program and agreed to participate in the national evaluation (Table 2, bottom row), again with substantial variation across sites.

Characteristics of those screened, enrolled, and participating in the evaluation

Many differences in screening characteristics were found between a) those screened who did not enroll in the program (N=188; 13%), b) those who enrolled into the program but who did not participate in the national evaluation (N=508; 36%), and c) those who agreed to participate in the evaluation (N=734; 51%) (Table 3). When compared with those screened but who did *not* enroll in the CICH program, those who enrolled were younger, more likely to be female; less likely to be black; and substantially more likely to have medical or mental health problems (Table 3). Since those enrolled into the program were more likely to have medical or mental health problems than those screened but not enrolled., “creaming”, or selecting “healthier” people for enrollment into the program does not appear to have occurred.

Compared to those who enrolled but did not participate in the evaluation, those who enrolled into CICH and did participate in the evaluation were generally older, more likely to be male and black, far more likely to have medical or mental health problems (including higher rates of psychotic disorder or other serious mental illness) and to have alcohol abuse problems (Table 3). Moreover, participants in the evaluation were less likely to have been screened outdoors or at drop-in centers, and were more likely to be screened at soup kitchens or treatment programs.

Three months prior to the baseline assessment, the proportion of CICH clients who had spent at least one night in the nine housing arrangements examined were as follows: own place 29%; someone else's place 21%; hotel/SRO/boarding home 15%; halfway house 13%; transitional housing 12%; hospital 15%; jail 5%; shelter 53%; and, outdoors 43%. These percentages add up to greater than 100% because CICH

clients lived in an average of 2.1 (sd=1.4) different housing arrangements during the 3-month period prior to the baseline assessment interview.

Baseline characteristics of evaluation participants by site

Baseline characteristics – including program eligibility, demographic characteristics, use of outpatient services, and a variety of baseline health status measures – are presented for both the entire sample of CICH clients (N=736), and for participants at each site (ranging from N=48 in Ft. Lauderdale to N=97 in Denver) (Table 4).

Evaluation participants were enrolled into the program within 8 days of being screened, on average (sd=49), and had their baseline assessments within 30 days (sd=49) of being enrolled into the program (Table 4, bottom two rows). Philadelphia and San Francisco were distinctive with respect to lag times both between screening and enrollment, and between enrollment and baseline assessment. Screening assessment dates for evaluation participants in Philadelphia were generally 40 days after their enrollment dates. In contrast, in San Francisco participants were generally screened 59 days before their enrollment dates. However, baseline assessments were administered to participants in San Francisco within just 12 days of program enrollment, compared with the 63 day average enrollment-baseline lag time in Philadelphia (Table 4). As with the variation in number and proportion of people screened and enrolled described above, unique recruitment and enrollment procedures developed in response to local conditions at each site and summarized previously (Table 1) may explain the variation observed across sites in enrollment and baseline assessment lag times.

Characteristics of clients housed at baseline

A potentially important difference between sites is the percentage of subjects who were already housed and living in their own place at baseline (28% overall, ranging from 4% in Ft. Lauderdale, Philadelphia, and Portland, to 38% (Los Angeles), 41% (Denver), and 84% (San Francisco)). Since more than one in four participants were already in permanent independent housing before informed consent could be obtained (i.e. at the time the baseline assessment was administered), we examined differences in baseline characteristics between subjects who were housed at baseline, and those not yet housed, as well in subsequent service use and outcomes.

Adjusting for site, those living in their own place at the time of the baseline interview were less likely to be veterans (18% vs. 35%), had a higher levels of mental functioning on the SF-12 (40.4 vs. 38.3), and were less distressed due to psychiatric symptoms (1.36 vs. 1.59) (Table 5), perhaps reflecting fewer impediments to entering into housing and/ or the positive short-term effects of being housed. These individual characteristics were also included as covariates in subsequent multivariate analyses to adjust for potentially confounding effect of housing status at baseline on longitudinal service use patterns and client outcomes.

Follow-up rates

Follow-up rates among all CICH clients participating in the evaluation during the first year of follow-up were as follows: 91% at 3-months, 88% at 6-months, 87% at 9-months, and 85% at 12-months. Nearly 2,400 follow-up assessments were completed during the first year of client follow-up (all of which took place between March 2004 and

May 2006). Some interviews were only partially completed or have yet to be submitted (Table 6). Across the sites, 12-month follow-up rates ranged from 73% in Columbus and 77% in Chattanooga, to 93% in Martinez and 94% in Denver (Table 6).

Changes in service use and outcomes during the first year after entering the program

Adjusting for site differences, statistically significant time effects were found on 15 of 19 service use measures, and 20 of 30 client outcome measures (Table 7) briefly summarized below:

Service use

Access to healthcare services and case management increased over the first 6 months as the proportion of participants who reported having a usual health care provider increased from 36% at baseline to 52% and 49% at 9 and 12-month follow-ups (Table 7). Other indicators of increased access to healthcare services included an increase in the average number of preventive procedures (from 7.4 at baseline to 8.4 at 9 and 12-months), and an increase in the average number of health behaviors discussed with a healthcare provider (from 3.3 at baseline to 3.9 at 12-month follow-up). The proportion of uninsured decreased from 21% at baseline to 12% at 6, 9 and 12-months thereafter.

Increasing proportions of clients also reported being visited by case managers in the community (45% at baseline to 71% and 67% at 9 and 12-months' follow-up), being provided money management assistance (19% at baseline to 31% at 12-months), and having contact with their landlords (70% at baseline to 75% at 12-months) (Table 7).

While no statistically significant change was found in the average number of outpatient medical services used over time, the average number of outpatient mental health visits increased from 3.5 at baseline to 4.1 at 3-months, and then declined to 2.9 at 12-months. The average number of substance use treatment visits declined from a peak of 5.0 at baseline to 2.9 at 9-months, and then increased modestly to 3.5 at 12-months.

Summary Measures of Service Use

The total number of outpatient visits for all services increased from 11.2 at baseline to 12.1 at 3-months, and then declined to 8.6 and 8.8 at 9 and 12-months, while the proportion of the six key service components received by each client rose from 64% at baseline to 81% 3 months after entering the program and remained fairly constant thereafter (bottom line of upper panel of Table 7). This suggests that clients remained engaged in most aspects of the CICH intervention during their first year in the program, although use of outpatient services decreased after the first 3 month assessment.

The average number of individual providers decreased over time from 4.5 at 3-months to 4.0 at 9 and 12-months, while the index of subjectively experienced coordination of services (range 0-2) increased from 1.1 at baseline to 1.3 at 3-months and thereafter (Table 7).

Client outcomes

CICH clients were housed quickly, and remained housed in one or more different settings thereafter. An examination of living arrangements among CICH clients at baseline and at each subsequent completed follow-up interview shows that 89% of CICH

clients appeared to have been continuously housed throughout the 12-month follow-up period, where continuously housed is defined as living in their own place, in someone else's place, or in an SRO hotel at the time of the interview. In contrast, only 2% lacked housing at baseline and at all completed follow-up assessments thereafter, and 8% were housed during some quarterly assessments, and not housed during other assessments (data not shown). The average number of days housed in the previous 90 days increased dramatically from 18 at baseline to 68 at the 3-month follow-up, and rose steadily thereafter to 83 at the 12 month follow-up. The fact that housing satisfaction remained largely unchanged among those housed, averaging 4.1 (out of a total possible 5) at baseline and 4.0 thereafter, suggests that CICH clients were generally quite satisfied with their housing placements, and remained so (Table 7). Once housed, clients quickly got to know at least one of their neighbors well (increasing from 38% at baseline to 67% at 3-months, and then increasing to 76-77% thereafter). Subjective quality of life (i.e. life satisfaction) also increased rapidly, albeit modestly, from 4.3 at baseline to 4.6 at 3-months and thereafter (an increase of 7%). The community integration index (reflecting participation in everyday activities such as shopping or going to a restaurant) also increased from 6.8 at baseline to 7.2-7.3 at 6-months and thereafter (also a 7% increase).

One possible contributor to increased subjective quality of life and community integration is increased income. Average total income increased continuously from \$380 at baseline to \$579 at 12-months. The proportion of clients receiving any type of public support rose from 70% at baseline to 81%-85% at 3-months and thereafter. Consequently, average public support income rose by 55%, from \$316 at baseline to \$478 a year later (Table 7).

Mental health functioning also increased over time, from 38.8 at baseline to 39.9-40.6 at 3-months and thereafter (a 4% increase), while psychological distress decreased steadily and significantly over time from 1.53 at baseline to 1.29 at 12-months (a 16% decline).

Finally, total average quarterly treatment costs per person decreased by 51% over the first year of treatment, from \$6,832 at baseline to \$3,376 12-months later, reflecting substantial decreased use of inpatient services (Table 7, bottom panel). Medical and dental costs costs per quarter decreased from \$3,219 at baseline to \$1,512 at 12-months. Similarly, mental health quarterly costs decreased from \$2,303 at baseline to \$1,138 at 12-months, while substance use treatment costs per quarter decreased from \$1,310 at baseline to \$734 at 12-months. The primary source of the decline in these costs was reduced inpatient treatment which decreased by over \$3,000 (from \$5,776 at baseline to \$2,677 a year later). The decrease in quarterly outpatient costs was significant, but smaller at about \$350 from \$1,056 to \$698 during the first year of treatment (Table 7).

No significant changes were found on other outcome measures over time, including social support, days in jail, and level of physical health functioning.

Adjustment for attrition

Although data loss was modest during the first year, especially for a chronically homeless sample, we examined the extent to which changes in service use and outcomes described above may have been biased by the attrition rates presented in Table 6. For this analysis we used the “marginal statistical model method of Robbins et al., (2000, 1993) to create sampling weights equal to the inverse of the predicted probability for each

client of completing a follow-up interview for each period of time. This probability was calculated using a logistic regression model in which seven basic eligibility characteristics (two homelessness categories and five disabling conditions, including dual mental health and substance abuse problem) and seven baseline socio-demographic characteristics (age, gender, education, race/ethnicity, marital status, veteran status, and duration of homelessness in lifetime) were entered as a single block of predictors.

We thus weighted observations from persons with similar socio-demographic and clinical profiles who were more likely to have missed a given follow-up interview more heavily. Mixed regression models using these weights were used to calculate the least square means presented in the non-weighted Table 7. Statistical significance test results changed for only 1 measure, illicit drug use. Although no difference in illicit drug use rates was found between non-weighted and weighted analyses, the later showed a small, but statistically significant decrease over time, whereas no significant change was found using unweighted analysis. (Table 8). Thus, attrition bias appears to be minimal, and subsequent analyses were run using the simpler and more straightforward non-weighted observations.

Changes in service use and outcomes by housing status at baseline

Because of concern that results could be biased by the fact that 28% of clients were already living in independent housing at the time of the baseline assessment (Table 4), we examined differences in service use and outcomes by this criterion. Adjusting for the baseline value of each measure, for site, and for significant bivariate differences between those housed and not housed at baseline (i.e., veteran status, mental health

functioning, and psychiatric symptom distress) (Table 5), the only significant difference in service use was in the proportion of core CICH services received (i.e. overall service integration – Table 9, last row) (71-74% vs. 80-83% after 3 months of entering the program). It thus appears that clients housed before informed consent and baseline assessment were obtained – were somewhat less engaged in full array of CICH services.

Significant differences between clients housed at baseline and others were observed on 7 of 30 outcome measures, primarily the 4 housing outcome measures (Table 10).

Clients housed at baseline also had *more* days of drinking to intoxication and more serious alcohol problems than those not housed at baseline, but also showed higher levels of physical functioning (Table 10). Alcohol problems *increased* more among clients housed at baseline than others, possibly suggesting that rapid placement into permanent housing without sobriety requirements may have facilitated continued abuse of alcohol during the first year in the program. It is also possible, however, that rapid placement allowed clients with more serious addiction problems to be served. Nevertheless, outcomes on these measures were no longer statistically different from 6-12 months.

Housing status at baseline thus appears not to be a seriously confounding influence on changes in service use patterns and outcomes over time. We nevertheless included the “housing status at baseline” indicator as a covariate in subsequent multivariate analyses.

Comparison of service use and outcomes across CICH client sub-groups

Mean service use levels and outcomes (Table 11) during the 12-month follow-up period were compared among the following five client sub-groups defined by critical baseline characteristics: 1) type of psychiatric disability (mental health vs. substance abuse vs. both), 2) age, 3) race/ethnicity, 4) incarceration history, 5) military service, and 6) gender.

Use of services

Psychiatric disability

Clients having both mental health and substance abuse problems (N=367; 52%) (hereafter referred to as “dual problem” clients) generally consumed higher levels of services than clients with substance abuse problems alone (N=137; 20%) (Table 11). Service use patterns of clients with mental health problems (N=170; 24%) and dual problem clients were similar, except that dual problem clients as one would expect, had more outpatient substance abuse visits quarterly (5.3 vs. 1.6 visits), and greater participation in Alcoholics Anonymous and Narcotics Anonymous (45% vs. 10%), than clients with mental health problems alone (Table 11).

Age

Younger clients, i.e. under the age of 50 (N=462; 66%), were greater consumers of mental health services, compared with older clients who made greater use of medical services. Younger clients were also more likely to have a primary mental health/substance abuse treater (67% vs. 62%), had more outpatient mental health visits

(3.8 vs. 3.0), and were more likely to have a primary case manager (28% vs. 24%) than older clients. Older clients, however, were more likely to have a usual physical health care provider (49% vs. 44%), had a greater number of preventive medical procedures (8.6 vs. 7.8), and had a greater number of outpatient medical visits (3.3 vs. 2.5) than younger clients (Table 11).

Race/ethnicity

The only statistically significant racial/ethnic difference in service use was that minorities (N=439; 63%) consumed more outpatient medical visits during the 12-month follow-up period than Caucasian, non-Hispanic clients (3.0 vs. 2.3) (Table 11).

Legal

Clients who had been incarcerated in their lifetimes (N=476; 71%) prior to entering CICH used more outpatient health (11.2 vs. 8.0) and substance abuse visits (5.0 vs. 1.9) and participated more in AA/NA (37% vs. 22%) than clients without incarceration histories, who, in turn, were more likely to have a usual health care provider (52% vs. 43%) (Table 11).

Veteran Status

Veterans (N=212; 30%) accessed higher levels of healthcare services than non-veterans. Veterans were less likely to report being uninsured (3% vs. 19%), more likely to have a usual health care provider (55% vs. 42%), received more outpatient visits

overall (11.8 vs. 9.5), and had more substance abuse treatment visits (5.5 vs. 3.3), perhaps reflecting their access to VA services, an important component of the CICH initiative (Table 11).

Gender

Female clients (N=171; 24%) were more likely than men to report having a usual health care provider (52% vs. 44%), outpatient mental health visits (4.1 vs 3.3), and a greater number of preventive procedures (8.7 vs. 7.9). Additionally, they were more likely to have a primary mental health/substance abuse treater (69% vs. 64%), a primary case manager (30% vs. 26%), and a money manager (32% vs. 24%) than were male clients (Table 11).

Client outcomes

Psychiatric disability

Significant differences were found among psychiatric disability groups on 27 of 30 outcome measures examined. Compared with clients with substance abuse problems, clients having mental health problems were less satisfied with their housing and with life in general, participated less in community activities, were less likely to know their neighbors well, less likely to work, and more dependent on public assistance. As a result they had higher total incomes, were more disturbed by psychiatric symptoms, and demonstrated more psychotic behaviors.

As expected, clients with substance abuse problems showed greater use and reported more problems with alcohol and drugs, compared with those with mental health

problems, including: more days intoxicated during the past 3 months (2.5 vs. 0.4), a higher rate of illicit drug use (35% vs. 24%), and higher ASI alcohol and drug scores (0.13 vs. 0.03 and 0.04 vs. 0.02, respectively) (Table 12).

Clients with dual mental health and substance abuse problems fell somewhere between these other two disability groups in the areas of knowing neighbors well, receipt of public assistance, total income, and observed psychotic behavior. Dual problem clients reported a lower level of mental health functioning, and greater alcohol and drug use problems and a higher rate of illicit drug use (44%) than either of the other two psychiatric disability groups, as well as higher quarterly medical/dental, substance abuse treatment, and total health care treatment costs (\$5,422 vs. \$3,104-\$3,869), including both higher inpatient costs (\$4,284 vs. \$2,471-\$3,216), and higher outpatient costs (\$1,151 vs. \$636-\$653) (Table 12) .

Age

Younger clients spent more days in jail (1.3 vs. 0.5), received less public assistance (\$392 vs. \$475) and total income (\$474 vs. \$571), had a lower level of mental health functioning (39.3 vs. 41.3), were more distressed by psychiatric symptoms (1.46 vs. 1.21), and were more likely to use illicit drugs (40% vs. 29%) than older clients. As one would expect, younger clients showed a higher level of physical functioning (45.9 vs. 42.8), and relatedly, lower medical/dental treatment costs (\$1,799 vs. \$2,881) than older clients (Table 12).

Race/ethnicity

Compared with Caucasian (non-Hispanic) clients, minority clients were more likely to be housed (83% vs. 80%) and had been housed for a greater number of days (68 vs. 64) during the previous 3 months. Minority clients also had larger social support networks (1.4 vs. 1.3), were more satisfied with life overall (4.7 vs. 4.4), had a higher level of mental health functioning (40.4 vs. 39.3), lower medical/dental and total health care treatment costs (\$3,892 vs. \$5,391), and, more specifically, lower inpatient care costs (\$2,954 vs. \$4,543) than Caucasian clients (Table 12).

Legal

Clients who had been incarcerated during their lifetimes prior to entering CICH were more likely to be homeless at the time of follow-up assessment, spent more days in jail, were more distressed by psychiatric symptoms, had higher rates of illicit drug use and greater alcohol and drug problems, as well as higher substance abuse treatment costs than clients without an incarceration history (Table 12).

Veteran Status

Veterans were more actively involved in the community and had greater public assistance and total incomes than non-veterans, yet were also less likely to be housed at follow-up and were less satisfied with life in general.

Gender

Female clients were more likely to be housed than males and were housed for more days, were more satisfied with life in general, and were more likely to receive

public assistance. However, female clients participated less in community activities, were less likely to be employed, presented with more psychotic behavior during interviews, had a lower level of mental health functioning, and had higher mental health services treatment costs (Table 12).

Changes in service use and outcomes by site

Significant differences between sites were found on all 19 service use measures (Table 13), and on 27 of 28 client outcome measures (excepting the average cost of medical and dental treatment) (Table 14).

For example, in New York, relatively few clients had someone managing their money (2% at baseline, rising to 4% at 3, 6, and 9-months to 7% by 12-months) (Table 13). In San Francisco, nearly all clients had money managers (85% at baseline and rising to 97-99% from 3 through 12-months). The proportion of clients having money managers in Los Angeles, Martinez and Philadelphia remained fairly constant around 18%, 24%, and 40%, respectively. Other sites showed rapidly increasing proportions of clients receiving money management, including Chattanooga (from 6% at baseline to 20% at 12-months) and Columbus (from 11% at baseline to 49% at 12-months).

Considering an outcomes example, the average number of days housed at baseline ranged from 5 in New York to 42 in San Francisco (Table 14). The spread between low and high remained relatively high at 3-months, ranging from 49 days in Portland to 85 days in San Francisco. However, beginning at 6 months and continuing to 12-months, the variability across sites on this outcome measure decreased, ranging from 78 days in Los Angeles to 90 days in Ft. Lauderdale at 12-months.

After adjusting for service use measures bivariately associated with each outcome, differences in outcomes across sites remained statistically significant on all but four cost measures: medical/dental, substance abuse treatment, inpatient care, and total healthcare costs, suggesting that differences in clinical outcomes are not accounted for by differences in service use (Table 15).

Association of service use and client outcomes

An analysis of aggregated data pooled across sites and time points showed that after, adjusting for site and service use measures bivariately associated with each outcome, each service use measure was significantly associated with at least one outcome measure.

Service use measures associated with the largest number of outcome measures included participation in alcoholics anonymous or narcotics anonymous (AA/NA) (associated with 11 outcomes), coordination of services, and having a money manager (9 outcomes), along with therapeutic alliance with a mental health/substance abuse provider (8 outcomes). The remaining 11 service use measures were associated with between 3 and 6 outcome measures (Table 16).

The two service use measures associated with the smallest number of client outcome measures were: a) any contact with landlord and b) total number of outpatient visits, which were each associated with only one outcome. Landlord contact was associated with a higher level of mental health functioning, and total number of outpatient visits with decreased total health care costs, indicating a savings in total health care costs of \$61 per outpatient visit, on average (Table 16). The number of outpatient

mental health visits and the number of different service providers were each associated with only two client outcomes.

AA/NA participation

Clients who participated more frequently in AA/NA meetings were housed an average of 8 days less per quarter than other clients. and showed significantly higher healthcare costs for all 3 types of care examined as well as for total outpatient costs. Those with more serious substance abuse problems most likely required a higher level of use of healthcare services. These clients also experienced more distress due to psychiatric symptoms. However, those participating in AA/NA were more actively involved in the community, had larger social networks, were more likely to be employed, and were more satisfied with their primary mental health/substance abuse treater than other clients (Table 16, column 9).

Having a money manager

Clients assigned to a money manager had more negative outcomes, including: fewer days of housing, more psychotic behaviors, and higher costs in the medical and mental health domains in addition to overall higher inpatient care costs. Clients having a money manager were also more likely to receive public support payments, and consequently, more total income than did clients without a money manager (Table 16, column 14). Presumably assignment of a money manager reflected these circumstances rather than being caused by them.

Coordination of services

Clients receiving more coordinated services had better outcomes than others, including having a greater number of days housed and more satisfaction with their housing. Coordination of services was also positively associated with greater satisfaction with life overall and greater trust in one's doctor; with higher levels of mental health functioning and less distress due to psychiatric symptoms; and with decreased rates of illicit drug use and less severe drug problems (Table 16, column 18).

Therapeutic alliance

As with coordination of services, the strength of the therapeutic alliance between clients and primary mental health or substance abuse providers was associated with several positive outcomes including greater housing satisfaction and greater satisfaction with life overall. The alliance was also associated with larger social support networks, higher levels of mental health functioning, and with lower rates of drug use and less serious drug problems (Table 16, column 10).

Differences between CICH clients and comparison group subjects

Baseline differences

Compared with CICH clients, comparison group subjects were less likely to have experienced 4 or more episodes of homelessness (54% vs. 68%), and less likely to have been primarily unemployed (34% vs. 46%), within the previous 3 years (Table 17). They were also less likely to be Asian/Pacific Islander (0% vs. 3%), and had fewer mental health problems than CICH clients. Comparison group subjects also had fewer mental

health and substance abuse diagnoses (2.6 vs. 3.6), with a lower likelihood of having been diagnosed with bipolar disorder (12% vs. 37%) or with anxiety disorder (22% vs. 44%). Differences in access to healthcare service at baseline were mixed, with comparison group subjects reporting higher rates of being uninsured (34% vs. 17%) and having fewer healthcare providers (3.7 vs. 4.7) than CICH clients, while being more likely to have a regular source of healthcare (90% vs. 76%) (Table 17). Comparison group subjects were also more likely than CICH clients to have received vocational rehabilitation services during the previous 3 months (25% vs. 13%), but were less likely to have received housing services (42% vs. 91%) or case management visits in the community (4% vs. 52%) than CICH clients. Finally, comparison group subjects had spent fewer days in the hospital during the previous 3 months than CICH clients (0.6 vs. 2.2), while being somewhat more religious and placing a greater importance on faith in their lives than CICH clients (2.1 vs. 1.9, on a scale from 0-3).

Overall group differences

After adjusting for site, the baseline value of the dependent variable, and the 14 baseline covariates described above and presented in Table 17, significant differences between the two groups during the 12-month follow-up period were found on five service use measures and on two outcome measures. Overall, CICH clients were 1) more likely to have health insurance (i.e., were less likely to be uninsured), 2) more likely to have a primary treater for mental health or substance abuse problems, 3) more likely to be visited by a case manager in the community, 4) had a greater number of different healthcare providers, and 5) received a more integrated “package” of housing and

supported services than did comparison group subjects (Table 18, “group” column). CICH clients were also housed a greater number of days, were less likely to be homeless at the time of assessment, and had higher public support incomes than comparison group subjects. No other statistically significant differences between groups were found.

Differences in rates of change

Rates of change in the proportions of individuals having a usual treater for both physical health problems and mental health/substance abuse problems increased for CICH clients, while decreasing for comparison subjects. The same was true of the proportion of subjects receiving a more integrated package of housing and supported services, although the declining proportion among comparison group subjects was less than was the case for the two primary treater/provider measures (Table 18, “group*time” column). Both groups showed increasing rates of being visited in the community by a case manager, but the rate of change was greater for CICH clients than for comparison group subjects.

Both groups showed dramatic improvements in housing rates over time, although the rate of improvement among CICH clients was substantially greater. CICH clients’ participation in community activities remained largely unchanged, while comparison group subjects’ participation declined modestly over time. A gradual, modest decline in the average number of days in jail was found among CICH clients, in contrast to more widely fluctuating decreases and increases in jail time observed from quarter to quarter among comparison group subjects.

Finally, there were no significant differences in total costs or changes in cost over time, although the overall pattern of total cost data suggests that CICH clients began with somewhat higher costs at baseline, but that at 12 months costs were not substantially different. Some differences were found between the groups in rates of change on the measure of quarterly substance abuse treatment costs, but these fluctuations are likely to reflect the relatively small number of clients in the comparison group.

Discussion

Evaluation and program goals

The primary purpose of the national evaluation of client outcomes in this evaluation was to monitor both the use of services and client outcomes systematically and uniformly among all 11 sites. The major goals of the program included: 1) rapid placement of chronically homeless individuals in permanent housing, and once placed, helping them to retain (keep) this housing, 2) providing an integrated set of housing and supported services to those enrolled into the program to improve health outcomes, 3) assisting those enrolled in accessing mainstream resources, most notably public assistance income, and 4) obtaining alternative long-term funding to sustain program services beyond the 3-year grant funded by HUD, DHHS and VA.

This report has addressed the first 3 goals of the program mentioned, all of which were successfully addressed. The average number of days housed at each follow-up assessment increased from 18 out of the previous 90 days at baseline to 68 days at 3-months and upwards to 83 days at 12-months. The vast majority of CICH clients were

thus placed into housing within 3 months of enrolling into the program, and nearly all of those placed remained housed one year later.

The proportion of core services received also increased from 64% at baseline to 78-81% thereafter, indicating that CICH providers effectively maintained contact with most CICH clients and were able to facilitate their engagement in treatment during the first year following enrollment into the program. In association with these changes, mental health functioning improved while psychological distress decreased steadily and significantly. However, more than one-third of clients reported using illicit drugs at each assessment, and alcohol and drug problems remained largely unchanged over time. It is possible that more time is needed for improvements to emerge in this outcome domain.

Thirdly, the percentage of CICH clients receiving public assistance increased from 70% at baseline to 81-85% thereafter. Mean monthly public assistance income increased steadily from \$316 at baseline to \$478 one year later, a 50% increase.

Service costs

The 50% reduction in total average quarterly health care services costs– from \$6,832 at baseline to \$3,376 at 12-months is encouraging although the lack of a randomly assigned comparison group precludes any causal inference.

CICH client sub-group differences

Among the six client sub-groups examined, minorities showed consistently more favorable outcomes than non-Hispanic whites. The remaining five sub-groups (defined by disability status, age, legal status, veterans status, and gender) all had a mixture of

“better” and “worse” outcomes. Sub-group analyses results were thus variable and do not suggest particularly beneficial effects for specific subgroups.

CICH client and comparison group differences

Comparisons of overall group differences and of rates of change between CICH and comparison clients at the five involved sites provide evidence that CICH increased access to housing, primary providers of both physical health and mental health, community-based case management, and a more integrated “package” of housing and supported services as well as a large number of total service providers than were available to other chronically homeless individuals in these communities.

Perhaps as a result of providing a fuller bundle of services, CICH clients showed substantially greater improvement in the number of days housed, throughout the 12-month follow-up period, without incurring significantly higher treatment costs and without any deleterious clinical outcomes found between the groups. There were no differences in other outcome measures.

Limitations

The major limitation of this preliminary report is that the comparison group used in examining the effectiveness of the CICH program was not identified through random assignment. Five sites recruited a comparison group, and these clients turned-out to differ from CICH clients on 80 of 290 baseline measures examined. Nevertheless, after adjustment, the housing benefits of CHIC emerged quite robustly.

The other (second) major characteristics, albeit not necessarily a limitation, is the considerable variation observed across program sites, including recruitment procedures, target client populations, the use of scattered site vs. congregate (SRO hotel) housing placements, geographic region, etc. While we have statistically adjusted for site differences, such adjustment can only partially reduce variability across sites.

This variability may, in fact, be a strength of the CICH demonstration because it shows that program objectives were achieved across a heterogeneous array of sites. Real-world dissemination of new initiatives invariably takes place in a complex and diverse array of locations.

Conclusion

These preliminary findings suggest that a diverse population of chronically homeless adults with disabling conditions can successfully be housed and can maintain their housing when provided with permanent housing services, intensive case management, and access to primary healthcare and mental health/substance abuse treatment. Data from comparison sites suggest that CICH clients experienced improved housing outcomes at no greater treatment cost.

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Table 1. Description of CICH sites

Site	Description
Broward County, Florida ~ HHOPE Program	The HHOPE program, a collaboration of the Broward County Human Services Department, Homeless Initiative Partnership Administration, provides scattered site housing and supportive services to severely and persistently mentally ill and chronically homeless individuals through Shelter Plus Care. The project is implementing a Housing First approach and using a modified ACT team. Their goal is to serve 80 individuals over the life of the project.
Chattanooga, Tennessee ~ The Collaborative Initiative	Chattanooga’s Collaborative Initiative, coordinated by the Fortwood Center, serves chronically homeless individuals in scattered site housing. The Initiative is implementing the Housing First approach and an ACT team to provide wrap-around services for clients in housing. The goal of the Initiative is to serve 50 individuals over three years, in housing subsidized through Shelter Plus Care.
Chicago, Illinois ~ ACT Resources for Chronically Homeless (ARCH)	Led by the Chicago Department of Human Services, ARCH targets chronically homeless individuals with mental health, substance abuse, and/or co-occurring disorders. They are using Shelter Plus Care vouchers to secure 59 tenant-based permanent housing units. The units are both scattered site and clustered. ARCH uses a Housing First approach and an ACT team. Their goal is to bring about significant expansion of permanent supportive housing, coordination and maximization of mainstream resources and to expand of evidence-based service strategies
Columbus, Ohio ~ Rebuilding Lives PACT Team Initiative (RLPTI)	RLPTI is led by Southeast, which contracts project management to the Community Shelter Board. The project serves chronically homeless individuals with severe mental disabilities or co-occurring substance abuse and mental illness. For this initiative, they have five clustered site housing units through a Supportive Housing Program grant and use a Housing First approach. They use a PACT model and have incorporated several evidence-based practices. One of RLPTI’s main goals is to increase the behavioral healthcare system in Franklin County, particularly by increasing Southeast’s capacity and treatment slots. In addition, they plan to increase income supports and entitlements for the chronically homeless. The goal of the RLPTI is to house and serve 108 individuals.
Contra Costa, California ~ Project Coming Home (PCH)	Led by the Contra Costa Office of Homeless Programs, PCH serves chronically homeless individuals using a Health, Housing, and Integrated Services Network (HHISN). Through Shelter Plus Care, PCH uses a housing first, scattered site model facilitated through partnerships with the housing authority and Shelter Inc. The goals of PCH include: increasing the effectiveness of integrated systems of care by providing comprehensive services and treatment, linked to housing; increasing the use of mainstream resources; and supporting the development of infrastructures that sustain housing, services treatment, and inter-organizational partnerships beyond the federal initiative. Over a five-year period, they expect to contact 5,250 chronically homeless individuals and house 155 individuals.
Denver, Colorado ~ Denver Housing First Collaborative (DHFC)	DHFC, a Shelter Plus Care grant, is a collaboration of agencies led by Colorado Coalition for the Homeless. It seeks to provide coordinated housing and treatment to chronically homeless individuals with disabilities, substance abuse, severe and persistent mental illness, co-occurring disorders, and/or chronic physical illness. DHFC uses a Housing First approach and an ACT team. Housing is both scattered site and clustered. DHFC aims to serve 100 clients in year one.
Los Angeles, California ~ Skid Row Collaborative	The Collaborative, which has a Shelter Plus Care grant, is coordinated by the Skid Row Housing Trust, and seeks to serve chronically homeless and disabled persons. It uses the Health, Housing, and Integrated Services Network (HHISN) model. To reach their goal of assisting clients into permanent housing, the Collaborative is expanding mental health and co-occurring treatment services by adding a team of case manager specialists in mental health and substance abuse and peer advocates to provide outreach, engagement, support and recovery services/ treatment, and case management. They have a goal of housing and serving 62 individuals. The project has already had contact with 140 homeless individuals in its first year.
New York, New York ~ In Homes Now (IN)/Project Renewal	IN, a Supportive Housing grant, is coordinated by Project Renewal serves chronically homeless individuals who are active substance abusers in New York City. IN uses a Housing First approach and an Intensive Integrated Service Team to supplement existing programs (Continuum of Care and Pathways to Housing) for which active substance users are not eligible. The project’s goal is to house and provide comprehensive services for 40 individuals from the target population in scattered-site SRO apartments located in Manhattan and the Bronx.
Philadelphia, Pennsylvania ~ Home First	With the City of Philadelphia as the lead agency, Home First serves homeless individuals with serious mental illness and/or co-occurring disorders and with the highest number of documented days in the city’s emergency shelter and residential behavioral health system. They use a Housing First approach and an ACT team. The project intends to serve approximately 85 chronically homeless individuals over the life of the Supportive Housing Program project.
Portland, Oregon ~ The Community Engagement Program (CEP III)/Central City Concern	CEP III, which has a Shelter Plus Care grant, is coordinated by Central City Concern. The project focuses on the “hardest to serve” of Portland’s chronically homeless population – those with a significant disability (i.e., physical health, mental health, and/or substance abuse issues) and/or co-occurring disorders. Based on ACT and the Housing First approach, clients are housed in scattered site, clustered, or Shelter Plus Care units. The project’s main goal is to demonstrate an effective model in reducing chronic homelessness for people with co-occurring disorders. CEP III seeks to serve 100 clients in the first year and 150 over the life of the project.
San Francisco, California ~ Direct Access to Housing (DAH)	The San Francisco Department of Public Health is the lead agency for the Direct Access to Housing initiative, which has a Supportive Housing Program grant. They are creating 70 units of permanent supportive housing through an expansion of their DAH program at the Empress Hotel. DAH serves chronically homeless individuals with disabilities, using a supportive housing model.

Table 2. Characteristics of those screened for CICH by site

	TOTAL (N=1,430)		Chattanooga, (N=77)		Chicago, IL (N=92)		Columbus, OH (N=93)		Denver, CO (N=100)		Ft. Laurer., FL (N=49)		Los Angeles, (N=146)		Martinez, CA (N=476)		New York, NY (N=128)		Philadelphia, (N=72)		Portland, OR (N=104)		San Fran., CA (N=93)		ANOVA / Chi-Square			
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	df	F	p	
	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N	Pct.	N		X ²		
Age (yrs.)	44.7	10	43.3	11	44.4	8	44.7	9	46.8	9	44.6	9	43.3	8	43.8	10	49.8	14	46.6	10	43.2	10	43.43	9.5	10	5	***	
Male	74%	1061	75%	58	77%	71	77%	72	80%	80	69%	34	68%	99	71%	338	84%	108	71%	51	73%	76	80%	74	10	18	n.s.	
Race/ethnicity																												
White	45%	649	60%	46	9%	8	30%	28	46%	46	59%	29	29%	42	64%	306	11%	14	17%	12	63%	66	56%	52	10	257	***	
Black	44%	630	39%	30	89%	82	69%	64	28%	28	39%	19	61%	89	26%	126	67%	86	81%	58	13%	14	37%	34	10	296	***	
Native American	3%	42	0%	0	0%	0	0%	0	15%	15	0%	0	2%	3	2%	10	2%	2	0%	0	10%	10	2%	2	10	82	***	
Asian	1%	14	0%	0	0%	0	0%	0	0%	0	0%	0	3%	5	0%	2	1%	1	1%	1	0%	0	5%	5	10	34	***	
Hawaiian/Other Asian	1%	14	0%	0	1%	1	0%	0	0%	0	0%	0	1%	1	2%	8	0%	0	0%	0	1%	1	3%	3	10	13	n.s.	
Hispanic	7%	101	0%	0	2%	2	1%	1	11%	11	4%	2	9%	13	7%	34	16%	21	0%	0	13%	14	3%	3	10	49	***	
Treatment Category																												
Individual	100%	1426	100%	77	99%	91	100%	100	100%	100	100%	49	100%	146	100%	476	100%	128	100%	72	100%	104	98%	91	10	19	*	
Parent of minor child	0%	3	0%	0	1%	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	2%	2	10	23	*	
Homeless Category																												
Past yr. or longer	69%	980	65%	50	80%	74	74%	69	23%	23	61%	30	86%	125	69%	330	64%	82	75%	54	62%	64	85%	79	10	142	***	
4+ episodes past 3 yrs.	31%	450	35%	27	20%	18	26%	24	77%	77	39%	19	14%	21	31%	146	36%	46	25%	18	38%	40	15%	14	10	142	***	
Disability																												
Medical problem	34%	488	34%	26	14%	13	20%	19	82%	82	27%	13	42%	61	29%	136	19%	24	51%	37	32%	33	47%	44	10	168	***	
Mental health problem	60%	854	94%	72	42%	39	96%	89	72%	72	90%	44	98%	143	39%	187	10%	13	88%	63	67%	70	67%	62	10	452	***	
Substance abuse prob.	77%	1106	35%	27	83%	76	51%	47	93%	93	53%	26	77%	113	82%	390	97%	124	69%	50	92%	96	69%	64	10	202	***	
Developmental	4%	60	3%	2	0%	0	1%	1	1%	1	4%	2	5%	8	5%	26	0%	0	4%	3	5%	5	13%	12	10	35	***	
Enrolled into CICH	87%	1242	79%	61	74%	68	92%	86	100%	100	100%	49	79%	116	94%	448	38%	49	100%	72	99%	103	97%	90	10	368	***	
Contact location																												
Shelter or mission	26%	374	10%	8	45%	41	54%	50	14%	14	41%	20	6%	9	28%	133	50%	64	22%	16	8%	8	12%	11	10	173	***	
Street, park, outdoors	25%	358	9%	7	4%	4	8%	7	37%	37	10%	5	20%	29	49%	233	21%	27	0%	0	6%	6	3%	3	10	276	***	
Soup kitchen	2%	24	18%	14	0%	0	0%	0	0%	0	14%	7	0%	0	0%	0	1%	1	0%	0	2%	2	0%	0	10	193	***	
Drop in center	13%	188	10%	8	4%	4	0%	0	3%	3	6%	3	32%	47	14%	65	3%	4	0%	0	50%	52	2%	2	10	234	***	
Residential tx program	4%	57	3%	2	3%	3	8%	7	4%	4	0%	0	0%	0	2%	10	5%	7	0%	0	7%	7	18%	17	10	71	***	
Mental health agency	5%	77	23%	18	4%	4	17%	16	0%	0	14%	7	1%	2	2%	9	0%	0	7%	5	2%	2	15%	14	10	131	***	
Housing agency	7%	95	1%	1	5%	5	5%	5	26%	26	0%	0	20%	29	3%	13	0%	0	7%	5	1%	1	11%	10	10	138	***	
Health clinic	2%	26	16%	12	4%	4	0%	0	5%	5	4%	2	1%	1	0%	1	0%	0	0%	0	0%	0	1%	1	10	108	***	
Hospital	1%	18	1%	1	2%	2	0%	0	2%	2	0%	0	0%	0	0%	0	0%	0	1%	1	3%	3	10%	9	10	68	***	
VA facility	5%	77	6%	5	0%	0	9%	8	0%	0	6%	3	12%	18	1%	6	11%	14	15%	11	3%	3	10%	9	10	69	***	
Jail or prison	0%	5	0%	0	0%	0	0%	0	2%	2	0%	0	1%	1	0%	0	0%	0	1%	1	0%	0	1%	1	10	16	n.s.	
Other location	9%	131	1%	1	27%	25	0%	0	7%	7	4%	2	7%	10	1%	6	9%	11	46%	33	19%	20	17%	16	10	226	***	
Contact initiated by...																												
Lead agency	27%	390	44%	34	16%	15	29%	27	56%	56	16%	8	3%	4	3%	15	63%	81	61%	44	37%	38	73%	68	10	474	***	
Partnering agency	51%	734	17%	13	10%	9	46%	43	33%	33	35%	17	73%	107	93%	443	29%	37	1%	1	24%	25	6%	6	10	684	***	
Other agency referral	10%	149	34%	26	47%	43	9%	8	11%	11	10%	5	5%	8	2%	8	0%	0	4%	3	34%	35	2%	2	10	303	***	
Evaluation staff	14%	188	11%	8	4%	4	0%	0	3%	3	6%	3	33%	47	14%	65	3%	4	0%	0	50%	52	3%	2	10	227	***	
Self-referral	4%	51	3%	2	11%	10	11%	10	0%	0	16%	8	11%	16	1%	3	2%	2	0%	0	0%	0	0%	0	10	102	***	
Other source	4%	56	0%	0	15%	14	5%	5	0%	0	18%	9	5%	7	1%	7	5%	7	0%	0	4%	4	3%	3	10	78	***	
Clinician observations																												
Medical problem	34%	480	42%	32	20%	18	11%	10	84%	84	43%	21	38%	56	25%	121	23%	29	46%	33	38%	39	40%	37	10	178	***	
Psychotic disorder	20%	286	16%	12	15%	14	52%	48	20%	20	59%	29	28%	41	11%	51	3%	4	54%	39	20%	21	8%	7	10	223	***	
Other SMI disorder	47%	679	81%	62	29%	27	59%	55	56%	56	78%	38	94%	137	33%	156	11%	14	49%	35	54%	56	46%	43	10	309	***	
Alcohol abuse	60%	856	39%	30	64%	59	48%	45	85%	85	51%	25	60%	87	63%	302	76%	97	50%	36	68%	71	20%	19	10	130	***	
Drug abuse	60%	857	29%	22	62%	57	41%	38	42%	42	39%	19	73%	107	71%	339	71%	91	56%	40	67%	70	34%	32	10	139	***	
Developmental	6%	82	10%	8	1%	1	4%	4	1%	1	12%	6	8%	12	4%	20	1%	1	4%	3	6%	6	22%	20	10	68	***	
Client response																												
Taked briefly	5%	65	0%	0	9%	8	1%	1	0%	0	0%	0	36%	52	0%	0	2%	3	1%	1	0%	0	0%	0	10	377	***	
Not interested in svcs	1%	10	1%	1	2%	2	0%	0	0%	0	0%	0	2%	3	0%	0	2%	2	0%	0	1%	1	1%	1	10	14	n.s.	
Interested in basic svcs	32%	458	4%	3	12%	11	8%	7	2%	2	4%	2	3%	5	72%	343	5%	6	6%	4	5%	5	75%	70	10	717	***	
Interested in full svcs	63%	897	95%	73	77%	71	91%	85	98%	98	96%	47	59%	86	28%	133	91%	117	93%	67	94%	98	24%	22	10	577	***	
Screening group																												
Not enrolled into CICH	13%	188	21%	16	26%	24	8%	7	0%	0	0%	0	21%	30	6%	28	62%	79	0%	0	1%	1	3%	3	10			

Table 3. Characteristics of individuals screened, enrolled into the CICH program, and evaluation participants. [stats as of Feb. 2006]

	TOTAL (N=1,430; 100%)		Not enrolled (N=188; 13%)		Enrolled (N=508; 36%)		Participant (N=734; 51%)		ANOVA / Chi-sqr.		
	Mean/%	SD/N	Mean/%	SD/N	Mean/%	SD/N	Mean/%	SD/N	df	F/Chi-Sq	p
Age (yrs.)	44.7	10	46.8	13	43.2	10	45.2	9	2	11	***
Male	74%	1061	80%	151	69%	353	76%	557	2	11	**
Race/ethnicity											
White	45%	649	26%	49	60%	305	40%	295	2	80	***
Black	44%	630	60%	113	30%	153	50%	364	2	69	***
Native American	3%	42	2%	3	2%	11	4%	28	2	4	n.s.
Asian	1%	14	0%	0	1%	4	1%	10	2	3	n.s.
Hawaiian/Other Asian	1%	14	1%	1	1%	7	1%	6	2	1	n.s.
Hispanic	7%	101	11%	21	7%	37	6%	43	2	6	*
Treatment Category											
Individual	100%	1426	99%	186	100%	508	100%	732	2	6	n.s.
Parent of minor child	0%	3	1%	1	0%	0	0%	2	2	2	n.s.
Homeless Category											
Past yr. or longer	69%	980	67%	126	72%	368	66%	486	2	6	n.s.
4+ episodes past 3 yrs.	31%	450	33%	62	28%	140	34%	248	2	6	n.s.
Disability											
Medical problem	34%	488	23%	44	26%	132	43%	312	2	48	***
Mental health problem	60%	854	39%	74	48%	243	73%	537	2	117	***
Substance abuse problem	77%	1106	79%	149	84%	425	72%	532	2	22	***
Developmental disability	4%	60	1%	1	6%	32	4%	27	2	12	**
Contact location											
Shelter or mission	26%	374	36%	67	24%	124	25%	183	2	10	**
Street, park, outdoors	25%	358	23%	43	45%	230	12%	85	2	182	***
Soup kitchen	2%	24	1%	1	0%	2	3%	21	2	13	**
Drop in center	13%	188	12%	22	18%	93	10%	73	2	19	***
Residential tx program	4%	57	4%	8	1%	6	6%	43	2	17	***
Mental health agency	5%	77	3%	5	2%	8	9%	64	2	33	***
Housing agency	7%	95	1%	2	2%	10	11%	83	2	53	***
Health clinic	2%	26	4%	7	0%	1	2%	18	2	13	**
Hospital	1%	18	1%	1	0%	1	2%	16	2	10	**
VA facility	5%	77	5%	10	1%	7	8%	60	2	27	***
Jail or prison	0%	5	0%	0	0%	2	0%	3	2	1	n.s.
Other location	9%	131	12%	22	5%	24	12%	85	2	19	***
Contact initiated by...											
Lead agency	27%	390	35%	65	5%	27	41%	298	2	194	***
Partnering agency	51%	734	41%	77	87%	440	30%	217	2	400	***
Referral by other agency	10%	149	9%	17	4%	20	15%	112	2	42	***
Evaluation staff	14%	188	12%	22	18%	93	11%	73	2	16	***
Self-referral	4%	51	4%	8	1%	6	5%	37	2	13	**
Other source	4%	56	9%	17	3%	13	4%	26	2	16	***
Clinician observations											
Medical problem	34%	480	24%	45	26%	130	42%	305	2	43	***
Psychotic disorder	20%	286	7%	13	14%	72	27%	201	2	56	***
Other serious mental d/o	47%	679	35%	65	42%	213	55%	401	2	34	***
Alcohol abuse	60%	856	64%	121	66%	334	55%	401	2	17	***
Drug abuse	60%	857	60%	112	74%	376	50%	369	2	70	***
Developmental disability	6%	82	3%	5	6%	30	6%	47	2	4	n.s.
Client response											
Taked briefly	5%	65	14%	27	6%	29	1%	9	2	62	***
Not interested in svcs	1%	10	3%	6	0%	2	0%	2	2	19	***
Interested in basic svcs	32%	458	19%	36	63%	321	14%	101	2	353	***
Interested in full svcs	63%	897	63%	119	31%	156	85%	622	2	375	***

* p<.05 ** p<.01 *** p<.001

Table 4. Baseline characteristics of national evaluation subjects across sites [stats as of Feb. 2006]

	TOTAL (N=736)		CHA (N=53)		CHI (N=61)		COL (N=80)		DEN (N=97)		FTL (N=48)		LOS (N=64)		MAR (N=50)		NYC (N=52)		PHI (N=69)		POR (N=72)		SAF (N=90)		ANOVA / Chi-Sqr.					
	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	Mean%	SD/N	df	F/X2	p	
Client Eligibility																														
% Homeless greater than 1 year	86%	630	89%	47	90%	55	78%	62	92%	89	94%	45	88%	56	76%	38	87%	68	99%	68	60%	43	91%	82	10	10	66	***		
% Homeless 4 or more periods	69%	510	74%	39	67%	41	25%	20	82%	80	96%	46	77%	49	64%	32	40%	21	68%	47	81%	58	86%	77	10	10	136	***		
% With substance abuse problem	72%	532	49%	26	80%	49	41%	33	94%	91	48%	23	64%	41	72%	36	94%	49	74%	51	90%	65	76%	68	10	10	118	***		
% With alcohol problem	52%	385	36%	19	57%	35	34%	27	84%	81	42%	20	36%	23	44%	22	65%	34	57%	39	65%	47	42%	38	10	10	78	***		
% With drug problem	52%	381	34%	18	64%	39	28%	22	43%	42	27%	13	55%	35	52%	26	75%	39	64%	44	65%	47	62%	56	10	10	68	***		
% With mental health problem	77%	564	100%	53	43%	26	90%	72	73%	71	100%	48	94%	60	66%	33	33%	17	83%	57	74%	53	82%	74	10	10	152	***		
% With schizophrenia	19%	137	25%	13	10%	6	20%	16	14%	14	19%	9	28%	18	22%	11	0%	0	43%	30	13%	9	12%	11	10	10	54	***		
% With depression	28%	206	25%	13	20%	12	34%	27	20%	19	38%	18	33%	21	30%	15	27%	14	23%	16	31%	22	32%	29	10	10	12	n.s.		
% With bipolar	19%	139	40%	21	8%	5	28%	22	26%	25	38%	18	11%	7	12%	6	4%	2	13%	9	17%	12	13%	12	10	10	53	***		
% With ptsd	7%	53	4%	2	3%	2	6%	5	11%	11	6%	3	9%	6	2%	1	0%	0	3%	2	11%	8	14%	13	10	10	22	*		
% With other psychiatric d/o	3%	22	2%	1	2%	1	3%	2	2%	2	0%	0	9%	6	0%	0	0%	0	0%	0	1%	1	10%	9	10	10	33	***		
% Ever hospitalized for psych.	51%	373	70%	37	30%	18	48%	38	44%	43	67%	32	73%	47	42%	21	10%	5	57%	39	51%	37	62%	56	10	10	27	**		
% Ever taken meds for psych.	68%	503	85%	45	39%	24	75%	60	70%	68	100%	48	78%	50	58%	29	27%	14	67%	46	68%	49	78%	70	10	10	20	*		
% Ever SA & MH problem	52%	386	49%	26	30%	18	36%	29	67%	65	48%	23	61%	39	42%	21	33%	17	65%	45	64%	46	63%	57	10	10	55	***		
% With medical problem	65%	476	79%	42	48%	29	36%	29	82%	80	54%	26	70%	45	76%	38	54%	28	68%	47	63%	45	74%	67	10	10	75	***		
% With developmental disability	10%	73	23%	12	5%	3	1%	1	1%	1	23%	12	1%	1	17%	11	8%	4	12%	6	4%	3	13%	9	24%	22	10	10	58	***
% Parent/guard. minor child	0%	1	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	1%	1	10	10	7	n.s.		
Mean no. minor children	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	10	1.3	n.s.		
Demographics																														
Mean age	46	9	44	10	45	8	46	8	47	9	44	9	44	10	49	10	47	9	46	10	44	9	46	10	10	10	1.9	*		
% Male	76%	556	74%	39	77%	47	76%	61	79%	77	71%	34	69%	44	74%	37	87%	45	71%	51	80%	51	80%	72	10	10	9	n.s.		
% Minority (non-caucasian)	62%	458	36%	19	93%	57	70%	56	54%	52	48%	23	84%	54	44%	22	88%	46	83%	57	36%	26	51%	46	10	10	124	***		
% Single (never married)	48%	351	40%	21	44%	27	36%	29	51%	49	42%	20	59%	38	22%	11	48%	25	68%	47	51%	37	52%	47	10	10	36	***		
% Married	2%	12	0%	0	3%	2	1%	1	0%	0	0%	0	5%	3	0%	0	6%	3	1%	1	0%	0	2%	2	10	10	16	n.s.		
% Divorced/ separated/ widowed	33%	243	43%	23	20%	12	39%	31	37%	36	40%	19	23%	15	48%	24	35%	18	16%	11	32%	23	34%	31	10	10	27	**		
% Veterans	30%	220	30%	16	26%	16	41%	33	26%	25	21%	10	30%	19	40%	20	37%	19	32%	22	26%	19	23%	21	10	10	14	n.s.		
Mean years homeless (lifetime)	8	6	7	5	7	4	8	7	10	6	6	5	8	6	8	6	8	6	10	6	9	7	9	8	10	10	2.2	*		
Use of Outpatient Services																														
Mean no. mental health visits	4	11	4	12	3	13	3	7	1	2	9	19	5	12	2	3	2	7	4	10	2	5	9	18	10	10	4.4	***		
Mean no. substance abuse visits	6	18	2	7	6	22	0	3	2	10	2	11	6	16	5	19	17	29	5	14	14	23	10	24	10	10	6.0	***		
Mean no. medical care visits	3	8	4	9	2	12	1	4	4	4	4	15	2	3	3	5	3	6	3	8	3	8	4	11	10	10	0.9	n.s.		
Treatment Outcomes																														
Housing																														
% Living in own place	28%	205	30%	16	10%	6	30%	24	41%	40	4%	2	38%	24	12%	6	10%	5	4%	3	4%	3	84%	76	10	10	233	***		
% Living alone	27%	196	30%	16	8%	5	30%	24	39%	38	4%	2	36%	23	10%	5	10%	5	4%	3	6%	4	79%	71	10	10	209	***		
% Receiving rental subsidy	27%	200	30%	16	10%	6	29%	23	41%	40	4%	2	36%	23	10%	5	8%	4	4%	3	4%	3	83%	75	10	10	233	***		
Mean no. days housed (past 90)	5	14	7	16	3	13	5	13	10	21	0	1	4	9	3	14	1	2	2	9	1	6	15	19	10	10	8.1	***		
Mean no. days homeless(past90)	57	37	49	33	66	37	55	39	61	37	62	36	49	37	62	35	84	18	60	38	61	29	29	34	10	10	10.6	***		
Employment (past 30 days)																														
% Worked for pay	16%	121	26%	14	8%	5	18%	14	21%	20	27%	13	14%	9	22%	11	21%	11	7%	5	18%	13	7%	6	10	10	25	**		
Income (past 30 days)																														
Mean employment income	319	362	251	229	188	276	398	437	342	252	349	454	143	146	654	649	258	227	363	251	160	124	321	449	10	10	1.7	n.s.		
% receiving employment income	14%	103	30%	16	7%	4	14%	11	16%	16	23%	11	11%	7	22%	11	12%	6	6%	4	19%	14	3%	3	10	10	36	***		
Mean public assistance income	397	268	314	224	252	257	322	248	409	229	241	192	411	199	642	314	225	143	483	195	238	208	641	233	10	10	22.7	***		
% receiving public assistance	70%	515	74%	39	70%	43	63%	50	47%	46	46%	22	91%	58	66%	33	73%	38	77%	53	81%	58	83%	75	10	10	66	***		
Mean total income	460	316	402	276	283	287	381	301	453	253	359	357	484	275	746	446	282	193	520	235	297	238	682	227	10	10	17.3	***		
Physical Health																														
Mean SF-12 physical health	45	10	41	11	51	8	48	10	43	10	45	12	45	11	41	9	46	9	47	10	43	10	42	10	10	10	5.6	***		
Mental Health																														
Mean SF-12 mental health	38	12	34	11	43	10	30	9	42	11	36	12	34	13	39	12	45	10	46	11	34	12	40	11	10	10	15.4	***		
Mean BSI symptom score	1.7	3.7	2.2	0.8	1.1	0.9	1.7	0.9	1.4	0.8	1.9	0.9	1.6	0.9	1.3	0.8	1.1	0.7	1.2	0.9	1.9	0.9	2.5	10.3	10	10	1.1	n.s.		
Substance Abuse (past 30 days)																														
Mean no. days drunk	2.1	6.6	0.3	1.1	1.2	4.3	2.9	6.4	5.0	7.9	0.7	2.0	1.1	4.9	1.8	6.2	1.5	4.1	2.3	7.4	1.9	4.6	2.3	11.1	10	10	3.0	**		
% Used illicit drugs	39%	284	30%	16	54%	33	24%	19	41%	40	10%	5	30%	19	26%	13	60%	31	29%	20	54%	39	54%	49	10	10	66	***		
Mean ASI-alcohol score	0.15	0.27	0.10	0.10	0.14	0.18	0.15	0.19	0.22	0.18	0.11	0.12	0.09	0.12	0.13	0.18	0.17	0.15	0.14	0.21	0.15	0.19	0.19	0.63	10	10	1.4	n.s.		
Mean ASI-drug score	0.08	0.20	0.06	0.07	0.08	0.09	0.05	0.08	0																					

Table 5. Baseline characteristics of those living in their own place at the baseline assessment vs. those not yet living in their own place
(Least square means from ANCOVA analyses covarying for site)

	Not housed at BL (N=531; 72%)		Housed at BL (N=205; 28%)		ANCOVA		
	Mean	SE	Mean	SE	df	F	p
Socio-demographic							
Age	45.77	0.41	45.00	0.70	1	0.78	n.s.
Gender (male)	0.77	0.02	0.71	0.04	1	2.06	n.s.
Race/ethnicity (white=referent)							
Black	0.47	0.02	0.54	0.04	1	2.24	n.s.
Other minority (non-Hispanic)	0.08	0.01	0.05	0.02	1	1.47	n.s.
Hispanic	0.07	0.01	0.10	0.02	1	1.23	n.s.
Education	11.87	0.12	11.62	0.21	1	0.97	n.s.
Income (monthly total)	386	14	362	24	1	0.68	n.s.
Marital status (never married)	0.47	0.02	0.50	0.04	1	0.34	n.s.
Veteran	0.35	0.02	0.18	0.04	1	13.63	***
Homelessness history							
Age first homeless	32.67	0.54	31.94	0.93	1	0.39	n.s.
Yrs homeless (lifetime)	8.09	0.31	8.27	0.53	1	0.08	n.s.
Social support	1.38	0.05	1.45	0.09	1	0.40	n.s.
Disabling Condition(s)							
Medical	0.65	0.02	0.66	0.04	1	0.13	n.s.
Mental health	0.76	0.02	0.79	0.03	1	0.59	n.s.
Substance abuse	0.73	0.02	0.68	0.03	1	1.52	n.s.
Dual mental health & substance abuse	0.53	0.02	0.51	0.04	1	0.15	n.s.
Health Status							
Physical Health (SF12-physical)	45.50	0.46	44.32	0.80	1	1.42	n.s.
Mental Health							
SF12-mental	38.25	0.36	40.39	0.63	1	7.56	**
BSI	1.59	0.04	1.36	0.07	1	7.14	**
Psychotic behaviors observed	0.22	0.01	0.22	0.02	1	0.00	n.s.
Alcohol & Drug Use							
No. days drunk	2.20	0.26	1.68	0.45	1	0.87	n.s.
Used illicit drugs	0.41	0.02	0.32	0.04	1	3.83	n.s.
ASI alc	0.13	0.01	0.10	0.02	1	2.53	n.s.
ASI drug	0.06	0.00	0.04	0.01	1	3.68	n.s.

* p<.05 ** p<.01 *** p<.001

Table 6. Evaluation follow-up interview statistics [stats as of May 2006]

Site		BL	3-mo FU	6-mo FU	9-mo FU	12-mo FU
CHA	N completed (a)	53	47	47	48	39
	N partials (b)	0	6	5	4	12
	N forthcoming (c=d-a-b)	0	0	1	1	2
	N total (d=N bl's)	53	53	53	53	53
	comp rate (a / a+b)	100.0%	88.7%	90.4%	92.3%	76.5%
	collect rate (a+b / d)	100.0%	100.0%	98.1%	98.1%	96.2%
CHI	N completed	64	47	36	40	40
	N partials	0	11	18	11	7
	N forthcoming	0	6	10	13	17
	N total	64	64	64	64	64
	completion rate	100.0%	81.0%	66.7%	78.4%	85.1%
	collection rate	100.0%	90.6%	84.4%	79.7%	73.4%
COL	N completed	80	77	78	70	58
	N partials	0	3	2	10	22
	N forthcoming	0	0	0	0	0
	N total	80	80	80	80	80
	completion rate	100.0%	96.3%	97.5%	87.5%	72.5%
	collection rate	100.0%	100.0%	100.0%	100.0%	100.0%
DEN	N completed	97	89	77	66	61
	N partials	0	6	12	11	4
	N forthcoming	0	2	8	20	32
	N total	97	97	97	97	97
	completion rate	100.0%	93.7%	86.5%	85.7%	93.8%
	collection rate	100.0%	97.9%	91.8%	79.4%	67.0%
FTL	N completed	53	45	42	35	29
	N partials	0	3	6	6	6
	N forthcoming	0	5	5	12	18
	N total	53	53	53	53	53
	completion rate	100.0%	93.8%	87.5%	85.4%	82.9%
	collection rate	100.0%	90.6%	90.6%	77.4%	66.0%
LOS	N completed	64	61	59	54	52
	N partials	0	3	4	7	9
	N forthcoming	0	0	1	3	3
	N total	64	64	64	64	64
	completion rate	100.0%	95.3%	93.7%	88.5%	85.2%
	collection rate	100.0%	100.0%	98.4%	95.3%	95.3%
MAR	N completed	54	47	45	45	42
	N partials	0	3	2	2	3
	N forthcoming	0	4	7	7	9
	N total	54	54	54	54	54
	completion rate	100.0%	94.0%	95.7%	95.7%	93.3%
	collection rate	100.0%	92.6%	87.0%	87.0%	83.3%
NYC	N completed	52	49	43	41	38
	N partials	0	3	6	6	5
	N forthcoming	0	0	3	5	9
	N total	52	52	52	52	52
	completion rate	100.0%	94.2%	87.8%	87.2%	88.4%
	collection rate	100.0%	100.0%	94.2%	90.4%	82.7%
PHI	N completed	69	62	64	59	53
	N partials	0	7	4	6	5
	N forthcoming	0	0	1	4	11
	N total	69	69	69	69	69
	completion rate	100.0%	89.9%	94.1%	90.8%	91.4%
	collection rate	100.0%	100.0%	98.6%	94.2%	84.1%
POR	N completed	72	65	63	58	58
	N partials	0	7	8	11	8
	N forthcoming	0	0	1	3	6
	N total	72	72	72	72	72
	completion rate	100.0%	90.3%	88.7%	84.1%	87.9%
	collection rate	100.0%	100.0%	98.6%	95.8%	91.7%
SAF	N completed	98	81	69	66	48
	N partials	0	12	15	11	11
	N forthcoming	0	5	14	21	39
	N total	98	98	98	98	98
	completion rate	100.0%	87.1%	82.1%	85.7%	81.4%
	collection rate	100.0%	94.9%	85.7%	78.6%	60.2%
Total	N completed	756	670	623	582	518
	N partials	0	64	82	85	92
	N forthcoming	0	22	51	89	146
	N total	756	756	756	756	756
	completion rate	100.0%	91.3%	88.4%	87.3%	84.9%
	collection rate	100.0%	97.1%	93.3%	88.2%	80.7%

Table 7. Changes in service use and client outcomes for all CICH clients participating in the evaluation (N=736) [stats as of Feb. 2006]
 (Least square means from mixed regression analyses examining main effect of time, covarying for site and following baseline characteristics: homeless greater than 1 yr. and/or homeless 4+ episodes prior to entering program; presence of medical problem, substance abuse problem, mental health problem, and/or dual mental health & substance abuse problems; age; minority; single; veteran; and, yrs. homeless in lifetime)

	bl	3-mo	6-mo	9-mo	12-mo	Type III test of fixed effect of time			
						Num df	Den df	F	p
Service use									
<u>Primary health care</u>									
Has usual health care provider	36%	45%	48%	52%	49%	4	2221	12	***
No. preventive procedures administered during past yr.	7.4	8.0	8.2	8.4	8.4	4	2259	12	***
No. health behaviors discussed with doctor for those with unhealthy behaviors	3.3	3.5	3.7	3.8	3.9	4	2228	9	***
No. OP medical visits (past 90)	2.8	3.1	2.8	2.5	2.3	4	2188	1	n.s.
Uninsured	21%	15%	12%	12%	12%	4	2170	13	***
<u>Mental health/SA treatment</u>									
Has primary mh/sa treater	54%	70%	69%	67%	67%	4	2132	20	***
No. OP mh visits (past 90)	3.5	4.1	3.8	3.2	2.9	4	2195	3	*
No. OP sa visits (past 90)	5.0	4.9	3.7	2.9	3.5	4	2192	3	**
Participated in AA/NA (past 90)	39%	34%	32%	30%	30%	4	2206	5	**
Therapeutic alliance	4.5	4.5	4.5	4.4	4.4	4	1425	1	n.s.
Consumer choice scale	4.1	4.1	4.0	4.0	3.9	4	1240	3	*
<u>Case management</u>									
Has primary case mgr	30%	33%	25%	25%	21%	4	2169	7	***
Visited by case mgr in commun (past 90)	45%	72%	70%	71%	67%	4	2017	68	***
Has money manager	19%	25%	26%	29%	31%	4	2279	13	***
Any contact with landlord (past 90)	70%	73%	72%	73%	75%	4	1750	1	n.s.
<u>Total service integration</u>									
Total no. OP health visits (all kinds)	11.2	12.1	10.4	8.6	8.8	4	2202	5	**
No. service providers	4.1	4.5	4.1	4.0	4.0	4	2161	3	*
Coordination of services scale	1.1	1.3	1.3	1.3	1.3	4	1678	14	***
Overall svcs integration	64%	81%	81%	79%	78%	4	2121	105	***
Client outcomes									
<u>Housing</u>									
Days housed	18	68	81	82	83	4	2127	913	***
Housed (own place, else's place or hotel)	38%	91%	94%	94%	95%	4	1934	449	***
Homeless	16%	2%	1%	1%	2%	4	1669	70	***
Housing satisfaction (1-5)	4.1	4.1	4.0	4.0	4.0	4	1721	4	**
<u>Community adjustment</u>									
Commun integration	6.8	7.1	7.3	7.2	7.3	4	2236	3	**
Knows any neighbors well	38%	67%	76%	77%	77%	4	1697	36	***
Social support	1.4	1.4	1.4	1.3	1.3	4	2220	1	n.s.
Days in jail	1.5	0.7	0.9	1.2	0.8	4	1811	2	n.s.
QOL	4.3	4.6	4.6	4.6	4.6	4	2171	5	***
<u>Income/Support</u>									
Any employment (past 30)	17%	16%	14%	19%	15%	4	2201	3	*
Employment income	\$43	\$60	\$50	\$73	\$58	4	2225	3	*
Any public support (past 30)	70%	81%	84%	85%	83%	4	2205	20	***
Public support income	\$316	\$390	\$454	\$460	\$478	4	2270	25	***
Total income	\$380	\$472	\$523	\$577	\$579	4	2236	30	***
<u>Mental health</u>									
SF-12 mental	38.8	39.9	40.3	40.6	40.3	4	2161	5	***
BSI	1.53	1.39	1.35	1.31	1.29	4	2267	12	***
Obs psych behav	0.22	0.20	0.22	0.23	0.23	4	2166	1	n.s.
Satisfaction with primary treater	5.2	5.1	5.2	5.1	5.1	4	1374	1	n.s.
<u>Substance abuse</u>									
Days intoxicated	2.1	1.6	1.7	1.8	2.1	4	2188	2	n.s.
Any drugs	38%	35%	34%	35%	38%	4	2241	2	n.s.
ASI alc	0.13	0.11	0.10	0.11	0.12	4	2238	4	**
ASI drug	0.05	0.05	0.04	0.05	0.05	4	2234	1	n.s.
<u>Physical health</u>									
SF-12 physical	45.2	45.2	44.8	44.5	44.8	4	2224	1	n.s.
Trust in physician (1-5)	3.8	3.9	3.9	3.9	3.9	4	984	3	*
<u>Treatment costs</u>									
Cost of medical/dental treatment	\$3,219	\$2,500	\$1,961	\$1,608	\$1,512	4	1977	3	*
Cost of mental health services	\$2,303	\$1,949	\$1,525	\$1,037	\$1,138	4	2154	4	**
Cost of substance abuse treatment	\$1,310	\$526	\$388	\$576	\$734	4	1891	10	***
Total health care cost	\$6,832	\$4,969	\$3,869	\$3,214	\$3,376	4	2040	8	***
Inpatient care costs	\$5,776	\$3,904	\$2,984	\$2,400	\$2,677	4	2038	7	***
Outpatient care costs	\$1,056	\$1,060	\$883	\$808	\$698	4	2221	8	***

* p<.05 ** p<.01 *** p<.001

Table 8. Use of services & client outcomes adjusted for site, baseline characteristics & non-response using sample weights

	bl	3-mo	6-mo	9-mo	12-mo	Type III Fixed Effect statistics			
						Num df	Den df	F	p
Use of services									
Uninsured	21%	15%	13%	12%	12%	4	2148	13	***
Has usual health care provider	36%	45%	47%	52%	49%	4	2189	11	***
No. preventive procedures	7.4	8.0	8.3	8.4	8.4	4	2235	11	***
No. health behaviors discussed	3.3	3.5	3.7	3.8	3.9	4	2200	9	***
No. OP medical visits	2.8	3.2	2.8	2.5	2.4	4	2167	1	n.s.
Has primary mh/sa treater	54%	69%	69%	67%	67%	4	2108	19	***
No. OP mh visits	3.5	4.1	3.8	3.3	2.9	4	2181	3	*
No. OP sa visits	4.9	4.8	3.7	2.9	3.5	4	2165	3	**
Participated in AA/NA	39%	33%	32%	29%	30%	4	2179	5	***
Therapeutic alliance	4.5	4.5	4.5	4.4	4.4	4	1411	1	n.s.
Consumer choice scale	4.1	4.1	4.0	4.0	4.0	4	1232	3	*
Has primary case mgr	30%	33%	25%	25%	21%	4	2157	8	***
Visited by case mgr in community	45%	72%	70%	72%	67%	4	2009	66	***
Has money manager	19%	26%	26%	29%	31%	4	2253	13	***
Any contact with landlord	69%	73%	71%	72%	75%	4	1644	1	n.s.
Total no. outpatient health visits	11.2	12.1	10.3	8.6	8.8	4	2177	5	***
No. service providers	4.1	4.5	4.1	4.0	3.9	4	2149	3	**
Coordination of services scale	1.1	1.3	1.3	1.3	1.3	4	1664	13	***
Overall svcs integration	64%	81%	81%	79%	78%	4	2095	100	***
Outcomes									
Days housed	18.1	68.5	81.3	82.1	82.6	4	2104	868	***
Housed (own place, else's place or hotel)	38%	90%	93%	94%	95%	4	1924	433	***
Homeless	15%	2%	1%	1%	2%	4	1655	69	***
Housing satisfaction	4.1	4.1	4.0	4.0	4.0	4	1723	3	*
Commun integration	6.8	7.1	7.3	7.2	7.2	4	2207	3	*
Knows any neighbors well	38%	67%	76%	77%	77%	4	1652	33	***
Social support	1.4	1.4	1.4	1.4	1.3	4	2196	1	n.s.
Days in jail	1.5	0.7	0.9	1.2	0.8	4	1808	2	n.s.
QOL	4.3	4.6	4.6	4.6	4.6	4	2143	5	**
Any employment	16%	16%	14%	19%	14%	4	2174	3	*
Employment income	43	61	50	73	58	4	2193	3	*
Any public support	71%	81%	84%	85%	84%	4	2178	19	***
Public support income	315	389	453	456	471	4	2234	24	***
Total income	379	472	522	573	572	4	2205	29	***
SF-12 mental	38.8	39.9	40.4	40.6	40.4	4	2132	5	***
BSI	1.52	1.39	1.35	1.31	1.28	4	2242	11	***
Obs psych behav	0.22	0.20	0.21	0.23	0.23	4	2136	1	n.s.
Satisfaction with primary treater	5.2	5.1	5.2	5.1	5.1	4	1357	1	n.s.
Days intoxicated	2.0	1.6	1.7	1.8	2.0	4	2159	2	n.s.
Any drugs	38%	35%	34%	35%	38%	4	2213	2	*
ASI alc	0.12	0.10	0.10	0.11	0.12	4	2216	4	**
ASI drug	0.05	0.05	0.04	0.05	0.05	4	2198	1	n.s.
SF-12 physical	45.2	45.2	44.8	44.5	44.8	4	2192	1	n.s.
Trust in physician	3.8	3.9	3.9	3.9	3.9	4	979	3	*
Cost of medical/dental treatment	\$3,210	\$2,471	\$1,961	\$1,620	\$1,491	4	1960	3	*
Cost of mental health services	\$2,300	\$1,961	\$1,513	\$1,038	\$1,108	4	2145	4	**
Cost of substance abuse treatment	\$1,306	\$531	\$396	\$572	\$726	4	1875	9	***
Total health care cost	\$6,815	\$4,957	\$3,863	\$3,223	\$3,316	4	2027	8	***
Inpatient care costs	\$5,761	\$3,890	\$2,975	\$2,407	\$2,619	4	2208	7	***
Outpatient care costs	\$1,054	\$1,062	\$886	\$811	\$696	4	2204	8	***

* p<.05 ** p<.01 *** p<.001

Table 9. Changes in service use by independent housing status (i.e., living in one's own place) at baseline

(Least square means from mixed regression analyses examining main effect of baseline housing status group, covarying for bl value of measure, site, and significant baseline differences between the 2 groups shown in Table 8) – group, time & group*time main effects included in models; group effects shown below

		bl	3-mo	6-mo	9-mo	12-mo	df(N)	df(D)	F	p
Service use										
<u>Primary health care</u>										
Has usual health care provider	Not living in own place	0.35	0.44	0.48	0.52	0.48	1	987	1	n.s.
	Living in own place	0.38	0.47	0.47	0.52	0.52				
No. preventive procedures	Not living in own place	7.40	8.02	8.28	8.40	8.38	1	912	0	n.s.
	Living in own place	7.54	7.90	8.18	8.39	8.56				
No. health behaviors discussed	Not living in own place	3.23	3.47	3.68	3.86	3.90	1	949	0	n.s.
	Living in own place	3.35	3.64	3.76	3.70	3.91				
No. outpatient medical visits	Not living in own place	3.24	2.94	2.60	2.36	2.20	1	1075	0	n.s.
	Living in own place	1.72	3.74	3.45	2.98	2.58				
Uninsured	Not living in own place	0.20	0.16	0.13	0.13	0.13	1	906	4	n.s.
	Living in own place	0.23	0.12	0.09	0.07	0.08				
<u>Mental health/SA treatment</u>										
Has primary mh/sa treater	Not living in own place	0.51	0.70	0.70	0.67	0.67	1	965	0	n.s.
	Living in own place	0.60	0.68	0.67	0.67	0.67				
No. OP mental health visits	Not living in own place	3.51	4.23	3.49	2.95	2.84	1	1145	2	n.s.
	Living in own place	3.43	3.92	4.66	3.97	3.18				
No. OP substance abuse visits	Not living in own place	4.87	5.00	4.01	3.12	3.36	1	1027	0	n.s.
	Living in own place	5.11	4.38	3.16	2.29	4.08				
Participated in AA/NA	Not living in own place	0.38	0.33	0.31	0.29	0.28	1	1004	2	n.s.
	Living in own place	0.40	0.33	0.34	0.32	0.36				
Therapeutic alliance	Not living in own place	4.62	4.67	4.59	4.51	4.34	1	484	0	n.s.
	Living in own place	4.66	4.51	4.48	4.53	4.62				
Consumer choice scale	Not living in own place	4.10	4.13	4.05	4.03	3.88	1	281	0	n.s.
	Living in own place	3.99	4.09	4.02	4.04	3.99				
<u>Case management</u>										
Has primary case manager	Not living in own place	0.28	0.32	0.26	0.26	0.21	1	1110	0	n.s.
	Living in own place	0.33	0.34	0.22	0.24	0.21				
Visited by case mgr in community	Not living in own place	0.37	0.73	0.73	0.75	0.70	1	1014	1	n.s.
	Living in own place	0.65	0.69	0.61	0.63	0.58				
Has money manager	Not living in own place	0.19	0.28	0.28	0.30	0.32	1	892	3	n.s.
	Living in own place	0.20	0.20	0.22	0.26	0.29				
Any contact with landlord	Not living in own place	.(a,b)	0.74	0.72	0.74	0.74	1	808	1	n.s.
	Living in own place	0.68	0.71	0.69	0.70	0.76				
<u>Total service integration</u>										
Total no. OP health visits	Not living in own place	11.61	12.15	10.07	8.39	8.37	1	1044	0	n.s.
	Living in own place	10.31	12.07	11.37	9.31	9.89				
No. service providers	Not living in own place	3.93	4.53	4.08	4.16	3.94	1	1099	0	n.s.
	Living in own place	4.46	4.48	4.28	3.64	4.08				
Coordination of services scale	Not living in own place	1.11	1.30	1.31	1.36	1.32	1	705	2	n.s.
	Living in own place	1.15	1.31	1.18	1.28	1.21				
Overall services integration	Not living in own place	60%	83%	83%	81%	80%	1	934	12	***
	Living in own place	75%	74%	74%	72%	71%				

* p<.05 ** p<.01 *** p<.001

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Table 10. Changes in client outcomes by independent housing status (i.e., living in one's own place) at baseline

(Least square means from mixed regression analyses examining main effect of baseline housing status group, covarying for bl value of measure, site, and significant baseline differences between the 2 groups shown in Table 8) – group, time & group*time main effects included in models; group effects shown below

		bl	3-mo	6-mo	9-mo	12-mo	df(N)	df(D)	F	p
Client outcomes										
<u>Housing</u>										
Days housed	Not living in own place	13.33	63.29	81.66	83.43	84.36	1	975	10	**
	Living in own place	29.60	81.36	80.46	79.00	77.69				
Housed (own, else's or hotel)	Not living in own place	0.15	0.88	0.93	0.94	0.95	1	902	140	***
	Living in own place	0.98	0.96	0.95	0.94	0.92				
Homeless	Not living in own place	0.22	0.03	0.02	0.02	0.02	1	569	24	***
	Living in own place	-0.01	-0.01	-0.01	0.01	0.01				
Housing satisfaction	Not living in own place	.	4.04	3.98	3.97	3.92	1	734	4	*
	Living in own place	4.09	4.08	4.06	4.08	4.08				
<u>Community adjustment</u>										
Commun integration	Not living in own place	6.82	7.12	7.29	7.19	7.32	1	971	0	n.s.
	Living in own place	6.80	6.99	7.21	7.32	7.12				
Knows any neighbors well	Not living in own place	0.23	1.23	1.23	1.23	1.23	1	238	2	n.s.
	Living in own place	0.41	0.73	0.81	0.78	0.77				
Social support	Not living in own place	1.41	1.40	1.38	1.34	1.31	1	894	0	n.s.
	Living in own place	1.35	1.32	1.38	1.40	1.34				
Days in jail	Not living in own place	1.46	0.92	0.87	1.29	1.01	1	812	1	n.s.
	Living in own place	1.48	0.22	0.94	0.96	0.11				
QOL	Not living in own place	4.22	4.61	4.71	4.66	4.67	1	1011	1	n.s.
	Living in own place	4.65	4.53	4.38	4.47	4.49				
<u>Income/Support</u>										
Any employment	Not living in own place	0.17	0.16	0.13	0.18	0.14	1	1042	0	n.s.
	Living in own place	0.15	0.18	0.17	0.20	0.15				
Employment income	Not living in own place	41	53	51	73	55	1	1071	0	n.s.
	Living in own place	50	81	45	69	57				
Any public support	Not living in own place	0.69	0.80	0.83	0.86	0.84	1	910	0	n.s.
	Living in own place	0.73	0.83	0.85	0.82	0.83				
Public support income	Not living in own place	310	389	442	462	492	1	978	0	n.s.
	Living in own place	319	377	476	457	464				
Total income	Not living in own place	378	466	524	575	589	1	1038	0	n.s.
	Living in own place	376	479	511	577	568				
<u>Mental health</u>										
SF-12 mental	Not living in own place	38.76	40.41	40.39	41.01	40.17	1	1018	2	n.s.
	Living in own place	38.94	38.78	40.13	39.49	40.75				
BSI	Not living in own place	1.55	1.40	1.33	1.30	1.26	1	952	0	n.s.
	Living in own place	1.46	1.37	1.40	1.35	1.35				
Observed psychotic behavior	Not living in own place	0.22	0.20	0.20	0.23	0.23	1	923	1	n.s.
	Living in own place	0.20	0.21	0.26	0.23	0.24				
Satisfaction with primary treater	Not living in own place	5.31	5.22	5.26	5.11	4.99	1	484	4	n.s.
	Living in own place	5.35	5.16	5.40	5.36	5.46				
<u>Substance abuse</u>										
Days intoxicated	Not living in own place	2.06	1.44	1.56	1.55	1.71	1	965	6	*
	Living in own place	2.08	2.03	2.09	2.42	2.86				
Any drugs	Not living in own place	0.40	0.33	0.33	0.35	0.36	1	979	1	n.s.
	Living in own place	0.36	0.38	0.36	0.35	0.41				
ASI alc	Not living in own place	0.13	0.09	0.09	0.10	0.11	1	917	9	**
	Living in own place	0.12	0.13	0.13	0.14	0.14				
ASI drug	Not living in own place	0.05	0.04	0.04	0.04	0.05	1	944	1	n.s.
	Living in own place	0.04	0.05	0.05	0.05	0.05				

* p<.05 ** p<.01 *** p<.001

Table 10. Changes in client outcomes by independent housing status (i.e., living in one's own place) at baseline (con't.)

		bl	3-mo	6-mo	9-mo	12-mo	df(N)	df(D)	F	p
Client outcomes										
<u>Physical health</u>										
SF-12 physical	Not living in own place	45.14	44.71	44.78	43.76	44.49	1	1020	6	*
	Living in own place	45.09	46.33	44.80	46.53	46.04				
Trust in physician	Not living in own place	3.79	3.88	3.90	3.82	3.84	1	349	3	n.s.
	Living in own place	3.88	4.11	3.87	3.96	4.03				
<u>Treatment costs</u>										
Cost of medical treatment	Not living in own place	2,730	2,554	2,117	1,781	1,590	1	1029	0	n.s.
	Living in own place	4,161	2,049	1,668	1,137	1,350				
Cost of mental health services	Not living in own place	2,324	2,201	1,463	978	1,314	1	1106	1	n.s.
	Living in own place	2,203	1,269	1,809	1,020	789				
Cost of substance abuse treatment	Not living in own place	1,406	488	326	485	480	1	782	2	n.s.
	Living in own place	1,040	590	546	834	1,461				
Total health care cost	Not living in own place	6,446	5,227	3,891	3,221	3,379	1	1035	0	n.s.
	Living in own place	7,454	3,962	4,047	3,043	3,631				
Inpatient care costs	Not living in own place	\$5,379	\$4,135	\$3,061	\$2,427	\$2,704	1	1043	0	n.s.
	Living in own place	\$6,418	\$2,965	\$3,013	\$2,163	\$2,885				
Outpatient care costs	Not living in own place	\$1,067	\$1,087	\$825	\$788	\$672	1	1077	1	n.s.
	Living in own place	\$1,038	\$999	\$1,049	\$879	\$754				

* p<.05 ** p<.01 *** p<.001

Table 11. Use of services among client sub-groups

(Mixed models; least square means; group & time as class variables, 10 site dummy codes as covariates)

Service use measures	Psychiatric disability group				Age group			Racial/ethnic group		
	1 mh prob (N=170; 24%)	2 sa prob (N=137; 20%)	3 dual prob (N=367; 52%)	tukey	<50 yrs. (N=462; 66%)	50+ yrs. (N=238; 34%)	p	minority (N=439; 63%)	white (N=261; 37%)	p
Uninsured	12%	20%	12%	1,3<2	15%	14%	n.s.	15%	14%	n.s.
Has usual health care provider	46%	41%	48%	2<3	44%	49%	*	47%	45%	n.s.
No. preventive procedures	8.1	7.6	8.3	2<3	7.8	8.6	***	8.2	7.9	n.s.
No. health behaviors discussed	3.3	3.3	4.0	1,2<3	3.7	3.5	n.s.	3.7	3.5	n.s.
No. OP medical visits	2.7	2.3	2.9	n.s.	2.5	3.3	**	3.0	2.3	*
Has primary mh/sa treater	69%	50%	71%	1,3>2	67%	62%	*	66%	64%	n.s.
No. outpatient mental health visits	3.4	1.5	4.5	2<1<3	3.8	3.0	*	3.4	3.7	n.s.
No. outpatient SA visits	1.6	4.0	5.3	1<2<3	3.9	4.2	n.s.	3.8	4.3	n.s.
Participated in AA/NA	10%	33%	45%	1<2<3	33%	32%	n.s.	34%	31%	n.s.
Therapeutic alliance	4.3	4.5	4.5	n.s.	4.5	4.5	n.s.	4.5	4.5	n.s.
Consumer choice scale	3.9	4.1	4.0	1<2,3	4.0	4.0	n.s.	4.0	4.0	n.s.
Has primary case manager	27%	22%	29%	2<3	28%	24%	*	26%	28%	n.s.
Visited by case manager in the community	64%	62%	66%	n.s.	65%	64%	n.s.	64%	66%	n.s.
Has money manager	24%	19%	29%	2<3	26%	26%	n.s.	27%	24%	n.s.
Any contact with landlord	71%	76%	72%	n.s.	72%	73%	n.s.	73%	72%	n.s.
Total no. outpatient health visits	7.8	7.8	12.7	1,2<3	10.1	10.5	n.s.	10.2	10.3	n.s.
No. service providers	4.2	3.8	4.3	2<3	4.1	4.2	n.s.	4.0	4.3	n.s.
Coordination of services scale	1.3	1.3	1.2	2>3	1.3	1.3	n.s.	1.3	1.2	n.s.
Overall svcs integration	80%	72%	76%	2<3<1	76%	77%	n.s.	77%	76%	n.s.

* p<.05 ** p<.01 *** p<.001

Table 11. Use of services among client sub-groups (con't.)

Service use measures	Legal status group			Military group			Gender group		
	jailed (N=476; 71%)	not jailed (N=194; 29%)	p	veteran (N=212; 30%)	non-veteran (N=488; 70%)	p	female (N=171; 24%)	male (N=529; 76%)	p
Uninsured	15%	14%	n.s.	3%	19%	***	14%	14%	n.s.
Has usual health care provider	43%	52%	**	55%	42%	***	52%	44%	**
No. preventive procedures	8.1	8.2	n.s.	8.5	7.9	**	8.7	7.9	***
No. health behaviors discussed	3.7	3.5	n.s.	3.9	3.5	**	3.7	3.6	n.s.
No. OP medical visits	2.7	2.8	n.s.	2.6	2.8	n.s.	3.0	2.6	n.s.
Has primary mh/sa treater	66%	64%	n.s.	66%	64%	n.s.	69%	64%	*
No. outpatient mental health visits	3.6	3.4	n.s.	3.8	3.4	n.s.	4.1	3.3	*
No. outpatient SA visits	5.0	1.9	***	5.5	3.3	**	4.3	3.9	n.s.
Participated in AA/NA	37%	22%	***	38%	30%	**	31%	34%	n.s.
Therapeutic alliance	4.5	4.5	n.s.	4.4	4.5	n.s.	4.6	4.4	n.s.
Consumer choice scale	4.0	4.0	n.s.	4.0	4.0	n.s.	4.0	4.0	n.s.
Has primary case manager	27%	26%	n.s.	25%	27%	n.s.	30%	26%	*
Visited by case manager in the community	64%	64%	n.s.	63%	66%	n.s.	66%	64%	n.s.
Has money manager	26%	26%	n.s.	22%	28%	*	32%	24%	**
Any contact with landlord	73%	73%	n.s.	75%	71%	*	71%	73%	n.s.
Total no. outpatient health visits	11.2	8.0	**	11.8	9.5	**	11.6	9.8	n.s.
No. service providers	4.1	4.3	n.s.	4.3	4.0	*	4.2	4.1	n.s.
Coordination of services scale	1.3	1.3	n.s.	1.3	1.2	n.s.	1.2	1.3	n.s.
Overall svcs integration	76%	77%	n.s.	77%	76%	n.s.	77%	76%	n.s.

* p<.05 ** p<.01 *** p<.001

Table 12. Outcomes among client sub-groups
(Mixed models; least square means; group & time as class variables, 10 site dummy codes as covariates)

Outcome measures	Psychiatric disability group				Age group			Racial/ethnic group		
	1 mh prob (N=170; 24%)	2 sa prob (N=137; 20%)	3 dual prob (N=367; 52%)	tukey	<50 yrs. (N=462; 66%)	50+ yrs. (N=238; 34%)	p	minority (N=439; 63%)	white (N=261; 37%)	p
Days housed	68	66	66	n.s.	67	65	n.s.	68	64	**
Housed (own, else's or hotel)	84%	81%	82%	n.s.	83%	80%	n.s.	83%	80%	*
Homeless	4%	7%	4%	2>3	4%	4%	n.s.	4%	6%	n.s.
Housing satisfaction	4.0	4.1	4.0	2>1,3	4.0	4.0	n.s.	4.0	4.0	n.s.
Commun integration	6.8	7.4	7.2	1<2	7.2	7.1	n.s.	7.2	7.0	n.s.
Knows any neighbors well	59%	75%	68%	1<3<2	67%	67%	n.s.	68%	65%	n.s.
Social support	1.1	1.5	1.5	1<2,3	1.4	1.3	n.s.	1.4	1.3	**
Days in jail	0.4	1.1	1.4	1<3	1.3	0.5	*	1.1	0.8	n.s.
Subjective quality of life	4.5	4.9	4.4	1,3<2	4.5	4.6	n.s.	4.7	4.4	***
Any employment	13%	21%	16%	1<2	17%	14%	n.s.	17%	14%	n.s.
Employment income	\$52	\$90	\$49	1,3<2	\$56	\$58	n.s.	\$65	\$42	n.s.
Any public support	87%	73%	80%	1>3>2	82%	78%	n.s.	81%	81%	n.s.
Public support income	\$470	\$327	\$429	1,3>2	\$392	\$475	***	\$424	\$414	n.s.
Total income	\$562	\$444	\$503	2<3<1	\$474	\$571	***	\$509	\$502	n.s.
SF-12 mental	41.2	42.4	38.2	1,2>3	39.3	41.3	***	40.4	39.3	**
BSI	1.28	0.93	1.64	2<1<3	1.46	1.21	***	1.34	1.43	n.s.
Observed psychotic behavior	0.29	0.15	0.21	2<3<1	0.23	0.21	n.s.	0.21	0.23	n.s.
Satisfaction with primary treater	5.0	5.1	5.2	1<3	5.2	5.1	n.s.	5.2	5.1	n.s.
Days intoxicated	0.4	2.5	2.4	1<2,3	1.9	1.7	n.s.	1.7	2.1	n.s.
Any drugs	24%	35%	44%	1<2<3	40%	29%	***	37%	35%	n.s.
ASI alcohol	0.03	0.13	0.15	1<2<3	0.12	0.10	n.s.	0.11	0.12	n.s.
ASI drug	0.02	0.04	0.06	1<2<3	0.05	0.04	**	0.05	0.05	n.s.
SF-12 physical	43.3	45.8	45.2	1<2,3	45.9	42.8	***	44.9	44.9	n.s.
Trust in physician	3.8	4.0	3.9	1<2,3	3.9	3.8	n.s.	3.9	3.9	n.s.
Cost of medical/dental treatment	\$2,403	\$1,105	\$2,551	2<3	\$1,799	\$2,881	*	\$1,716	\$2,908	*
Cost of mental health services	\$1,383	\$1,342	\$1,846	n.s.	\$1,729	\$1,314	n.s.	\$1,476	\$1,782	n.s.
Cost of substance abuse treatment	\$88	\$667	\$1,049	1<2,3	\$748	\$623	n.s.	\$706	\$705	n.s.
Total health care cost	\$3,869	\$3,104	\$5,442	1,2<3	\$4,272	\$4,812	n.s.	\$3,892	\$5,391	*
Inpatient care cost	\$3,216	\$2,471	\$4,284	2<3	\$3,347	\$3,949	n.s.	\$2,954	\$4,543	*
Outpatient care cost	\$653	\$636	\$1,151	1,2<3	\$922	\$860	n.s.	\$936	\$842	n.s.

* p<.05 ** p<.01 *** p<.001

Table 12. Outcomes among client sub-groups (con't.)

Outcome measures	Legal status group			Military group			Gender group		
	jailed (N=476; 71%)	not jailed (N=194; 29%)	p	veteran (N=212; 30%)	non-veteran (N=488; 70%)	p	female (N=171; 24%)	male (N=529; 76%)	p
Days housed	66	67	n.s.	66	67	n.s.	69	66	**
Housed (own place, else's place or hotel)	82%	83%	n.s.	80%	83%	*	86%	81%	**
Homeless	5%	3%	*	5%	4%	n.s.	4%	5%	n.s.
Housing satisfaction	4.0	4.0	n.s.	4.0	4.0	n.s.	4.0	4.0	n.s.
Commun integration	7.2	7.0	n.s.	7.6	6.9	***	6.8	7.2	*
Knows any neighbors well	69%	62%	*	64%	68%	n.s.	64%	68%	n.s.
Social support	1.4	1.3	n.s.	1.3	1.4	n.s.	1.4	1.4	n.s.
Days in jail	1.4	0.1	***	0.7	1.2	n.s.	0.6	1.2	n.s.
Subjective quality of life	4.6	4.5	n.s.	4.4	4.6	*	4.7	4.5	*
Any employment	16%	15%	n.s.	18%	15%	n.s.	12%	18%	**
Employment income	\$55	\$57	n.s.	\$72	\$50	n.s.	\$38	\$63	*
Any public support	80%	80%	n.s.	71%	85%	***	85%	79%	*
Public support income	\$421	\$407	n.s.	\$493	\$388	***	\$424	\$419	n.s.
Total income	\$505	\$504	n.s.	\$599	\$466	***	\$492	\$511	n.s.
SF-12 mental	39.8	40.5	n.s.	40.0	40.0	n.s.	40.3	39.9	n.s.
BSI	1.43	1.23	**	1.37	1.38	n.s.	1.44	1.35	n.s.
Observed psychotic behavior	0.21	0.25	*	0.22	0.22	n.s.	0.25	0.21	*
Satisfaction with primary treater	5.2	5.1	n.s.	5.1	5.2	n.s.	5.2	5.1	n.s.
Days intoxicated	2.1	1.2	**	1.8	1.9	n.s.	1.6	1.9	n.s.
Any drugs	39%	27%	***	34%	37%	n.s.	37%	36%	n.s.
ASI alcohol	0.12	0.09	*	0.12	0.11	n.s.	0.10	0.12	n.s.
ASI drug	0.05	0.03	***	0.04	0.05	n.s.	0.06	0.04	n.s.
SF-12 physical	44.5	45.5	n.s.	44.9	44.8	n.s.	42.8	45.5	***
Trust in physician	3.9	3.8	n.s.	3.9	3.9	n.s.	3.9	3.9	n.s.
Cost of medical/dental treatment	\$1,977	\$2,626	n.s.	\$2,420	\$2,048	n.s.	\$1,846	\$2,264	n.s.
Cost of mental health services	\$1,499	\$1,740	n.s.	\$1,611	\$1,581	n.s.	\$2,204	\$1,393	**
Cost of substance abuse treatment	\$823	\$467	*	\$697	\$710	n.s.	\$722	\$701	n.s.
Total health care cost	\$4,299	\$4,824	n.s.	\$4,721	\$4,335	n.s.	\$4,759	\$4,354	n.s.
Inpatient care cost	\$3,355	\$4,011	n.s.	\$3,746	\$3,462	n.s.	\$3,808	\$3,465	n.s.
Outpatient care cost	\$940	\$811	n.s.	\$962	\$874	n.s.	\$957	\$883	n.s.

* p<.05 ** p<.01 *** p<.001

Table 13. Service use changes by site

(Mixed model LS means (sitenum, funum & sitenum*funum effects; no covariates)

													Type III Tests of Fixed Effects (main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
Program services																
<u>Primary health care</u>																
Has usual health care provider	bl	44%	11%	21%	18%	19%	44%	52%	29%	66%	38%	54%	10	853	16	***
	3-mo	52%	23%	32%	24%	42%	44%	42%	55%	70%	46%	66%				
	6-mo	50%	29%	32%	22%	59%	36%	46%	69%	72%	52%	68%				
	9-mo	52%	52%	32%	26%	55%	43%	48%	72%	67%	55%	82%				
	12-mo	31%	46%	30%	31%	50%	43%	52%	63%	68%	50%	81%				
No. preventive procedures	bl	8.7	6.0	6.2	7.4	7.3	8.1	6.9	9.4	7.4	6.4	8.6	10	766	10	***
	3-mo	9.3	7.3	6.4	8.6	8.1	8.0	6.5	11.0	7.9	7.1	8.5				
	6-mo	9.1	8.3	6.9	8.9	9.2	8.3	7.0	10.7	8.0	7.0	8.4				
	9-mo	9.5	8.3	7.7	9.0	8.7	9.0	6.5	10.6	7.9	7.3	8.2				
	12-mo	9.8	8.5	7.9	9.2	8.9	9.4	6.3	10.5	7.5	7.0	8.0				
No. health behaviors discussed	bl	3.9	3.3	2.2	3.3	3.7	3.2	2.9	3.7	3.3	3.3	3.7	10	792	8	***
	3-mo	4.0	3.4	2.1	4.0	4.6	3.4	3.1	4.0	3.5	3.7	3.6				
	6-mo	4.0	4.0	2.5	4.1	4.5	3.7	3.2	4.3	3.7	3.9	3.6				
	9-mo	4.2	3.3	2.8	4.1	4.6	4.4	3.1	4.4	4.1	3.7	3.6				
	12-mo	4.5	4.2	3.2	4.2	4.8	4.4	2.9	4.4	3.6	3.6	3.4				
No. OP medical visits	bl	4.1	2.0	1.4	3.4	3.7	1.6	2.8	3.0	2.9	3.5	2.8	10	956	7	***
	3-mo	4.0	1.0	1.6	3.8	2.0	2.2	2.5	3.2	2.3	4.0	6.5				
	6-mo	2.5	1.6	2.3	2.3	2.1	1.1	2.8	2.0	1.9	3.4	7.6				
	9-mo	1.8	2.0	1.6	1.8	1.5	3.6	2.6	2.0	1.2	2.2	6.5				
	12-mo	1.7	1.0	2.5	2.1	0.8	1.6	2.8	1.9	1.3	3.0	5.5				
Uninsured	bl	6%	62%	28%	9%	13%	11%	4%	12%	10%	41%	33%	10	750	32	***
	3-mo	4%	66%	19%	1%	2%	1%	2%	4%	12%	28%	23%				
	6-mo	4%	61%	15%	1%	1%	0%	2%	7%	8%	23%	17%				
	9-mo	2%	61%	14%	3%	0%	0%	9%	6%	2%	25%	12%				
	12-mo	2%	57%	11%	6%	0%	0%	4%	6%	3%	25%	17%				
<u>Mental health/SA treatment</u>																
Has primary mh/sa treater	bl	50%	9%	26%	98%	64%	60%	38%	43%	57%	62%	62%	10	854	35	***
	3-mo	79%	39%	86%	99%	101%	72%	29%	41%	66%	74%	58%				
	6-mo	80%	36%	78%	94%	100%	78%	18%	68%	66%	78%	48%				
	9-mo	87%	40%	71%	90%	97%	65%	22%	46%	63%	77%	58%				
	12-mo	94%	52%	69%	89%	93%	67%	19%	53%	67%	65%	56%				

* p<.05 ** p<.01 *** p<.001

Table 13. Service use changes by site (con't.)

													Type III Tests of Fixed Effects			
													(main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
No. OP mh visits (past 90)	bl	3.4	2.3	3.0	1.0	6.4	4.7	1.5	2.6	4.3	2.3	6.9	10	976	10	***
	3-mo	4.6	2.6	3.7	2.1	8.8	4.3	1.6	4.0	3.5	4.6	6.5				
	6-mo	5.1	1.5	3.5	2.9	6.3	4.6	1.3	2.7	3.4	2.6	7.3				
	9-mo	5.5	1.8	3.2	2.5	5.7	2.5	1.2	1.1	3.0	2.5	6.2				
	12-mo	6.8	1.2	2.5	2.4	5.1	2.2	1.3	1.9	2.4	2.6	4.0				
No. OP sa visits (past 90)	bl	1.6	3.5	0.3	1.2	2.2	5.4	4.0	14.4	4.3	12.1	6.8	10	828	22	***
	3-mo	0.5	1.4	0.0	1.0	2.1	7.5	4.2	12.4	2.2	19.8	3.2				
	6-mo	1.6	-0.3	0.3	0.1	0.2	3.6	4.9	12.1	3.4	14.5	1.9				
	9-mo	0.8	0.5	0.2	0.4	-0.1	1.9	3.4	6.7	0.9	15.2	1.7				
	12-mo	1.6	1.9	0.8	1.0	0.0	1.2	2.5	9.7	4.2	12.1	4.8				
Participated in AA/NA	bl	26%	29%	26%	12%	43%	42%	61%	55%	46%	66%	38%	10	811	12	***
	3-mo	19%	33%	20%	9%	35%	38%	63%	43%	31%	68%	27%				
	6-mo	24%	47%	19%	14%	33%	27%	48%	39%	24%	59%	31%				
	9-mo	21%	36%	16%	15%	35%	32%	39%	44%	23%	55%	26%				
	12-mo	20%	33%	14%	25%	36%	42%	42%	32%	28%	49%	22%				
Therapeutic alliance	bl	4.9	4.5	4.3	4.7	4.8	4.4	4.4	5.0	4.3	4.7	4.4	10	697	6	***
	3-mo	4.5	4.3	3.9	4.8	5.0	4.0	4.2	4.7	4.5	4.9	4.1				
	6-mo	4.3	5.1	3.9	4.8	5.2	3.9	4.6	4.2	4.5	4.7	4.3				
	9-mo	4.2	4.5	4.0	4.6	5.2	4.4	4.6	4.2	4.4	4.7	4.3				
	12-mo	4.2	4.6	3.8	4.8	5.3	4.1	4.7	4.0	4.1	4.6	4.5				
Consumer choice scale	bl	4.0	4.3	4.5	4.3	4.1	3.7	3.8	4.0	4.1	3.9	3.9	10	655	13	***
	3-mo	3.8	4.1	4.7	4.3	4.0	3.7	3.7	3.8	4.1	4.1	4.0				
	6-mo	3.8	4.5	4.5	4.2	3.8	3.6	3.5	3.8	4.1	3.8	4.0				
	9-mo	3.9	4.3	4.5	4.2	3.8	3.6	3.6	3.7	4.1	3.9	4.1				
	12-mo	3.9	4.0	4.2	4.2	3.7	3.5	3.6	3.8	4.2	3.9	4.0				
<u>Case management</u>																
Has primary case mgr	bl	54%	20%	9%	1%	47%	48%	25%	35%	27%	40%	42%	10	1020	29	***
	3-mo	49%	34%	17%	1%	65%	61%	19%	63%	14%	25%	45%				
	6-mo	28%	33%	32%	0%	59%	26%	2%	39%	9%	24%	37%				
	9-mo	21%	32%	39%	5%	57%	26%	2%	49%	10%	23%	31%				
	12-mo	31%	38%	13%	2%	42%	12%	5%	44%	7%	26%	27%				
Visited by case mgr in commun.	bl	70%	58%	54%	39%	36%	31%	29%	57%	42%	69%	14%	10	887	128	***
	3-mo	97%	84%	93%	74%	98%	13%	77%	98%	80%	92%	10%				
	6-mo	97%	95%	80%	60%	100%	16%	86%	98%	91%	86%	2%				
	9-mo	93%	96%	80%	74%	100%	18%	81%	93%	95%	84%	6%				
	12-mo	89%	90%	72%	51%	100%	15%	76%	92%	96%	83%	12%				

* p<.05 ** p<.01 *** p<.001

Table 13. Service use changes by site (con't.)

													Type III Tests of Fixed Effects			
													(main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
Has money manager	bl	6%	4%	11%	7%	6%	18%	23%	2%	28%	3%	85%	10	796	74	***
	3-mo	8%	10%	16%	8%	10%	19%	25%	4%	42%	15%	99%				
	6-mo	12%	10%	25%	8%	12%	16%	21%	4%	42%	9%	99%				
	9-mo	14%	8%	39%	10%	13%	19%	28%	4%	44%	10%	97%				
	12-mo	20%	10%	49%	13%	13%	19%	28%	7%	41%	9%	99%				
Any contact with landlord	bl	53%	78%	44%	82%	98%	67%	69%	49%	51%	110%	99%	10	1235	64	***
	3-mo	72%	80%	19%	85%	93%	98%	69%	59%	45%	91%	100%				
	6-mo	76%	73%	4%	95%	95%	91%	70%	74%	37%	78%	99%				
	9-mo	79%	89%	14%	95%	92%	96%	58%	66%	34%	82%	100%				
	12-mo	80%	84%	31%	98%	93%	92%	73%	60%	31%	79%	100%				
<u>Total service integration</u>																
Total no. outpatient health visits	bl	9.1	7.8	4.8	5.6	12.3	11.7	8.3	20.0	11.6	18.0	16.5	10	861	16	***
	3-mo	9.0	4.9	5.3	7.0	12.9	14.0	8.3	19.7	7.9	28.4	16.2				
	6-mo	9.1	2.9	6.0	5.2	8.6	9.3	9.1	16.7	8.8	20.5	17.1				
	9-mo	8.0	4.3	4.9	4.6	7.2	7.9	7.2	9.8	5.0	19.8	14.7				
	12-mo	10.0	4.1	5.7	5.4	5.9	4.9	6.5	13.5	7.8	17.7	14.5				
No. service providers	bl	5.1	1.9	1.4	3.2	5.0	5.0	5.0	2.8	3.4	5.6	6.9	10	1006	31	***
	3-mo	5.0	3.4	2.6	3.7	6.4	5.2	4.4	4.8	2.8	6.3	6.0				
	6-mo	5.0	3.0	2.1	3.7	5.5	3.9	3.4	6.2	3.1	4.5	5.8				
	9-mo	5.1	3.3	1.4	3.5	5.7	4.5	3.2	5.8	3.9	3.9	5.0				
	12-mo	4.9	3.5	1.7	4.2	5.0	3.8	3.0	4.1	3.5	4.0	6.3				
Coordination of services scale	bl	1.0	1.1	1.1	1.4	1.3	1.1	1.2	0.9	1.0	1.1	1.0	10	767	27	***
	3-mo	1.1	1.3	1.3	1.8	1.6	1.1	1.2	1.0	1.2	1.3	1.2				
	6-mo	1.2	1.4	1.2	1.9	1.6	0.9	1.4	1.1	1.1	1.2	1.0				
	9-mo	1.2	1.2	1.2	1.9	1.6	1.1	1.2	1.1	1.2	1.3	1.1				
	12-mo	1.2	1.3	1.2	1.8	1.6	1.0	1.0	1.1	1.1	1.3	1.1				
Overall svcs integration	bl	71%	48%	60%	62%	63%	66%	66%	60%	57%	66%	82%	10	808	7	***
	3-mo	83%	69%	86%	76%	92%	75%	83%	80%	76%	87%	80%				
	6-mo	84%	78%	84%	76%	91%	76%	82%	79%	77%	86%	78%				
	9-mo	82%	76%	77%	74%	90%	76%	77%	79%	77%	84%	77%				
	12-mo	84%	71%	78%	76%	90%	72%	75%	76%	78%	81%	76%				

* p<.05 ** p<.01 *** p<.001

Table 14. Client outcome changes by site
(Mixed model LS means (sitenum, funum & sitenum*funum effects; no covariates)

													Type III Tests of Fixed Effects (main effect of site)			
Client outcomes		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
<u>Housing</u>																
Days housed	Bl	27	15	21	18	9	17	13	5	11	10	42	10	871	12	***
	3-mo	74	66	77	77	75	56	61	76	50	49	85				
	6-mo	85	79	83	85	89	71	87	88	73	71	86				
	9-mo	83	84	87	81	88	73	82	88	74	80	87				
	12-mo	85	83	84	82	90	78	84	83	78	80	82				
Housed (own, else's or hotel)	Bl	56%	24%	48%	48%	13%	55%	19%	16%	13%	12%	87%	10	773	14	***
	3-mo	97%	84%	93%	96%	98%	76%	98%	100%	82%	75%	100%				
	6-mo	97%	96%	95%	97%	99%	82%	96%	100%	88%	84%	100%				
	9-mo	91%	95%	97%	92%	100%	86%	91%	100%	88%	92%	100%				
	12-mo	99%	98%	99%	92%	100%	88%	88%	97%	91%	89%	100%				
Homeless	Bl	24%	16%	11%	27%	17%	8%	13%	16%	1%	35%	2%	10	554	5	***
	3-mo	0%	2%	3%	2%	0%	3%	2%	0%	2%	6%	0%				
	6-mo	0%	0%	3%	1%	0%	2%	0%	0%	2%	5%	0%				
	9-mo	4%	0%	1%	3%	0%	1%	0%	0%	0%	4%	0%				
	12-mo	0%	0%	0%	3%	0%	2%	2%	0%	2%	7%	0%				
Housing satisfaction	Bl	4.0	4.1	4.1	4.2	4.8	3.9	3.6	3.7	4.2	4.2	4.0	10	954	9	***
	3-mo	4.0	4.0	4.0	4.3	4.5	4.0	3.8	3.9	4.1	4.2	4.0				
	6-mo	4.0	3.9	4.0	4.2	4.5	3.8	3.8	3.9	4.0	4.1	3.9				
	9-mo	4.0	3.9	4.0	4.2	4.5	3.8	3.7	3.8	4.0	4.0	3.9				
	12-mo	4.1	3.9	3.9	4.1	4.6	3.7	3.5	3.8	3.9	3.9	4.1				
<u>Community adjustment</u>																
Commun integration	bl	5.3	7.2	5.6	6.5	6.5	7.8	6.8	7.9	6.4	7.1	8.1	10	817	11	***
	3-mo	6.2	8.1	5.5	7.0	6.8	8.0	7.0	7.9	7.0	7.3	7.9				
	6-mo	5.9	8.2	6.2	7.3	7.1	8.4	6.9	8.7	6.5	6.9	8.1				
	9-mo	6.3	8.1	6.2	7.2	7.2	7.8	6.8	8.6	6.3	7.0	8.3				
	12-mo	6.1	7.8	6.4	7.6	7.3	7.7	6.4	8.7	6.4	7.4	8.1				
Knows any neighbors well	bl	42%	79%	54%	29%	-10%	35%	24%	32%	-15%	5%	41%	10	1083	4	***
	3-mo	78%	70%	71%	73%	78%	61%	56%	81%	54%	54%	66%				
	6-mo	82%	64%	88%	83%	84%	69%	65%	86%	62%	65%	74%				
	9-mo	82%	90%	82%	74%	87%	78%	69%	95%	67%	68%	68%				
	12-mo	73%	89%	84%	74%	92%	69%	77%	83%	66%	70%	72%				
Social support	bl	1.2	2.0	0.6	1.1	1.5	1.1	1.4	1.7	2.1	1.8	1.3	10	777	19	***
	3-mo	1.2	2.4	0.7	1.3	1.3	1.0	1.3	1.7	1.8	1.6	1.3				
	6-mo	1.2	2.7	0.8	1.2	1.5	1.0	1.4	1.7	1.6	1.5	1.3				
	9-mo	1.2	2.4	0.9	1.1	1.3	1.2	1.2	2.0	1.2	1.5	1.3				
	12-mo	1.2	2.3	1.0	1.1	1.4	1.1	1.1	2.0	1.1	1.4	1.3				

* p<.05 ** p<.01 *** p<.001

Table 14. Client outcome changes by site (con't.)

													Type III Tests of Fixed Effects (main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
Days in jail	bl	4.0	0.0	3.6	1.4	2.0	1.1	0.3	0.2	2.3	0.8	0.2	10	695	2	*
	3-mo	2.2	0.1	0.7	0.6	0.0	1.2	0.1	0.1	1.6	1.1	0.3				
	6-mo	1.4	0.0	1.2	0.4	0.3	2.3	0.1	0.2	0.7	1.9	0.9				
	9-mo	2.0	0.0	2.0	1.1	2.2	1.1	0.8	0.8	1.7	1.0	0.5				
	12-mo	1.0	0.8	1.8	0.0	-0.1	1.1	0.1	0.1	2.4	0.8	0.0				
QOL	bl	4.1	4.0	4.0	4.5	4.3	4.1	4.6	4.7	4.9	4.0	4.7	10	839	5	***
	3-mo	4.2	4.6	4.2	4.8	4.6	4.6	4.8	4.9	5.1	4.3	4.6				
	6-mo	4.4	4.8	4.3	4.8	4.5	4.5	4.9	5.2	4.9	4.2	4.4				
	9-mo	4.4	5.2	4.3	4.5	4.7	4.6	5.0	5.0	4.8	4.0	4.5				
	12-mo	4.4	4.8	4.4	4.6	4.4	4.7	4.6	5.1	5.0	4.1	4.8				
<u>Income/Support</u>																
Any employment	bl	28%	11%	18%	19%	26%	15%	21%	20%	7%	19%	6%	10	870	4	***
	3-mo	17%	28%	16%	16%	12%	13%	18%	24%	8%	28%	7%				
	6-mo	18%	17%	13%	14%	19%	18%	13%	20%	2%	21%	9%				
	9-mo	27%	27%	16%	22%	30%	14%	17%	19%	6%	27%	9%				
	12-mo	22%	24%	13%	11%	18%	9%	11%	20%	5%	25%	11%				
Employment income	bl	\$80	\$19	\$55	\$50	\$81	\$16	\$108	\$30	\$22	\$33	\$13	10	934	2	**
	3-mo	\$46	\$131	\$62	\$57	\$74	\$20	\$101	\$108	\$40	\$39	\$31				
	6-mo	\$59	\$10	\$60	\$65	\$109	\$31	\$66	\$106	\$3	\$46	\$11				
	9-mo	\$74	\$99	\$67	\$81	\$127	\$27	\$72	\$125	\$6	\$115	\$56				
	12-mo	\$58	\$32	\$37	\$50	\$80	\$10	\$59	\$142	\$11	\$137	\$43				
Any public support	bl	74%	76%	62%	47%	47%	90%	67%	73%	76%	79%	84%	10	765	3	**
	3-mo	91%	83%	83%	61%	91%	91%	69%	82%	76%	86%	88%				
	6-mo	88%	80%	87%	68%	91%	87%	75%	88%	83%	85%	91%				
	9-mo	90%	85%	86%	80%	92%	87%	77%	86%	87%	85%	81%				
	12-mo	92%	88%	90%	81%	96%	78%	74%	79%	86%	76%	85%				
Public support income	bl	\$249	\$187	\$227	\$210	\$149	\$439	\$523	\$162	\$432	\$220	\$584	10	857	23	***
	3-mo	\$298	\$208	\$305	\$273	\$265	\$465	\$617	\$423	\$488	\$285	\$626				
	6-mo	\$341	\$213	\$428	\$306	\$272	\$549	\$650	\$447	\$580	\$293	\$800				
	9-mo	\$426	\$222	\$453	\$367	\$322	\$640	\$694	\$439	\$533	\$314	\$606				
	12-mo	\$392	\$231	\$537	\$395	\$340	\$667	\$703	\$464	\$526	\$347	\$575				
Total income	bl	\$359	\$208	\$286	\$279	\$236	\$472	\$698	\$219	\$453	\$272	\$646	10	894	27	***
	3-mo	\$358	\$345	\$370	\$342	\$360	\$530	\$775	\$544	\$515	\$338	\$734				
	6-mo	\$420	\$226	\$507	\$392	\$397	\$651	\$772	\$583	\$535	\$355	\$831				
	9-mo	\$515	\$338	\$524	\$461	\$481	\$705	\$858	\$635	\$545	\$438	\$840				
	12-mo	\$483	\$268	\$576	\$495	\$445	\$817	\$803	\$634	\$545	\$439	\$788				

* p<.05 ** p<.01 *** p<.001

Table 14. Client outcome changes by site (con't.)

													Type III Tests of Fixed Effects (main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
<u>Mental health</u>																
SF-12 mental	bl	36.5	40.9	33.9	41.2	38.0	36.8	39.4	41.5	42.9	36.0	40.5	10	870	14	***
	3-mo	38.7	41.8	34.3	43.9	38.7	38.2	40.7	41.9	42.2	38.6	40.7				
	6-mo	39.8	40.5	36.0	44.5	37.1	40.9	41.3	40.5	41.9	38.6	40.9				
	9-mo	40.0	43.0	36.6	45.1	38.7	40.6	42.1	42.5	40.3	38.2	39.6				
	12-mo	39.1	41.4	38.0	44.1	36.6	39.7	41.2	41.0	40.6	38.8	41.5				
BSI	bl	2.2	1.1	1.7	1.4	1.9	1.6	1.3	1.1	1.2	1.9	1.3	10	762	15	***
	3-mo	1.9	1.0	1.6	1.2	1.6	1.6	1.1	1.2	1.1	1.7	1.3				
	6-mo	2.0	0.8	1.6	1.3	1.6	1.5	1.0	1.0	0.9	1.7	1.4				
	9-mo	1.7	0.8	1.5	1.3	1.6	1.6	0.9	0.9	0.9	1.8	1.3				
	12-mo	1.5	0.8	1.6	1.3	1.5	1.5	0.9	1.0	1.0	1.7	1.2				
Obs psych behav	bl	0.30	0.10	0.06	0.13	0.31	0.31	0.32	0.12	0.08	0.35	0.35	10	771	44	***
	3-mo	0.24	0.04	0.10	0.10	0.33	0.24	0.22	0.10	0.06	0.41	0.41				
	6-mo	0.19	0.03	0.06	0.12	0.33	0.28	0.16	0.05	0.07	0.46	0.56				
	9-mo	0.14	0.03	0.06	0.16	0.32	0.32	0.11	0.13	0.11	0.57	0.51				
	12-mo	0.10	0.02	0.06	0.15	0.27	0.36	0.17	0.17	0.10	0.59	0.47				
Satisfaction with primary treater	bl	5.4	5.0	4.7	5.8	5.4	5.0	5.1	5.5	4.6	5.3	5.2	10	683	9	***
	3-mo	4.8	4.7	4.9	5.7	5.3	4.8	4.8	4.7	5.0	5.4	4.7				
	6-mo	4.7	4.9	4.8	5.8	5.3	4.8	4.9	4.9	5.2	5.5	5.1				
	9-mo	4.9	4.9	4.7	5.5	5.5	5.2	5.1	4.6	5.1	5.2	5.0				
	12-mo	4.9	4.8	4.5	5.6	5.5	4.9	5.3	4.6	5.1	5.2	5.2				
<u>Substance abuse</u>																
Days intoxicated	bl	0.3	1.3	2.9	5.0	0.7	1.0	1.9	1.6	2.4	2.0	1.3	10	773	7	***
	3-mo	0.2	2.3	1.8	4.4	1.0	0.9	1.7	0.7	1.4	1.0	0.9				
	6-mo	1.1	0.8	1.1	4.2	1.2	0.9	2.1	0.6	1.3	2.3	1.8				
	9-mo	0.6	1.2	0.5	5.9	1.6	0.3	3.2	1.1	1.5	1.6	1.6				
	12-mo	0.6	1.1	3.0	4.9	2.3	1.5	3.3	0.8	1.0	2.1	0.9				
Any drugs	bl	30%	55%	24%	40%	9%	29%	25%	63%	30%	54%	56%	10	786	11	***
	3-mo	24%	32%	24%	34%	11%	28%	31%	45%	30%	48%	62%				
	6-mo	13%	40%	25%	30%	13%	26%	25%	54%	30%	46%	61%				
	9-mo	14%	40%	18%	28%	17%	29%	28%	51%	39%	51%	66%				
	12-mo	21%	29%	31%	37%	20%	40%	29%	49%	32%	56%	63%				
ASI alc	bl	0.09	0.12	0.13	0.21	0.09	0.06	0.11	0.15	0.13	0.15	0.10	10	733	5	***
	3-mo	0.06	0.10	0.09	0.20	0.08	0.06	0.09	0.13	0.08	0.10	0.10				
	6-mo	0.07	0.10	0.08	0.19	0.10	0.05	0.09	0.12	0.09	0.12	0.10				
	9-mo	0.08	0.10	0.06	0.21	0.10	0.05	0.15	0.14	0.12	0.12	0.10				
	12-mo	0.08	0.10	0.12	0.19	0.10	0.08	0.13	0.12	0.11	0.14	0.09				

* p<.05 ** p<.01 *** p<.001

Table 14. Client outcome changes by site (con't.)

													Type III Tests of Fixed Effects (main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
ASI drug	bl	0.04	0.06	0.03	0.03	0.02	0.05	0.03	0.10	0.05	0.10	0.06	10	756	8	***
	3-mo	0.02	0.03	0.03	0.03	0.01	0.06	0.02	0.07	0.04	0.09	0.07				
	6-mo	0.02	0.04	0.03	0.02	0.02	0.05	0.03	0.05	0.04	0.08	0.09				
	9-mo	0.03	0.04	0.02	0.03	0.02	0.06	0.03	0.07	0.05	0.08	0.07				
	12-mo	0.03	0.03	0.04	0.03	0.04	0.05	0.04	0.06	0.04	0.10	0.07				
<u>Physical health</u>																
SF-12 physical	bl	41.9	51.6	48.1	43.8	45.0	45.2	41.2	46.5	47.3	43.8	42.6	10	806	8	***
	3-mo	40.7	50.3	49.2	45.4	45.2	43.8	42.7	45.7	47.4	42.6	43.1				
	6-mo	41.1	48.1	47.8	44.7	46.9	41.9	43.6	47.1	48.2	41.0	42.5				
	9-mo	39.2	48.5	47.3	42.4	45.4	42.7	45.5	45.7	47.0	42.5	43.7				
	12-mo	40.5	48.6	46.3	43.2	47.2	40.9	44.0	47.6	48.1	43.2	45.2				
Trust in physician	bl	3.7	3.6	3.9	3.9	4.2	3.7	3.6	3.8	3.8	3.8	3.9	10	528	4	***
	3-mo	4.0	3.8	4.4	3.9	4.2	4.0	3.5	3.9	4.0	3.5	4.1				
	6-mo	3.7	3.9	4.0	4.1	4.2	3.8	3.6	3.8	3.9	3.7	3.9				
	9-mo	3.8	3.9	4.0	3.7	4.2	3.6	3.6	3.9	4.0	3.7	3.9				
	12-mo	3.8	4.0	3.7	4.0	4.2	3.8	3.5	3.9	4.2	3.6	4.0				
<u>Treatment costs</u>																
Cost of medical/dental treatment	bl	\$2,596	\$1,013	\$2,671	\$2,944	\$4,551	\$1,375	\$5,352	\$2,358	\$3,661	\$1,739	\$6,489	10	770	1	n.s.
	3-mo	\$4,985	\$1,177	\$1,340	\$1,445	\$1,172	\$611	\$2,501	\$2,920	\$3,163	\$4,730	\$3,709				
	6-mo	\$1,919	\$838	\$302	\$2,230	\$821	\$2,592	\$1,602	\$2,643	\$2,843	\$2,799	\$2,752				
	9-mo	\$3,437	\$429	\$831	\$1,560	\$266	\$2,102	\$1,176	\$1,175	\$2,098	\$1,422	\$2,569				
	12-mo	\$1,953	\$510	\$609	\$1,021	\$72	\$1,627	\$3,642	\$893	\$2,569	\$2,085	\$977				
Cost of mental health services	bl	\$1,958	\$478	\$1,771	\$376	\$3,983	\$3,100	\$2,334	\$350	\$6,257	\$1,054	\$3,537	10	984	6	***
	3-mo	\$1,950	\$1,359	\$537	\$968	\$1,735	\$3,269	\$775	\$2,498	\$4,874	\$2,006	\$1,687				
	6-mo	\$1,880	\$1,060	\$609	\$983	\$818	\$4,377	\$312	\$289	\$3,075	\$1,616	\$1,435				
	9-mo	\$1,035	\$213	\$748	\$473	\$581	\$1,238	\$268	\$646	\$3,322	\$959	\$1,377				
	12-mo	\$1,150	\$91	\$1,437	\$551	\$552	\$2,630	\$330	\$969	\$2,885	\$413	\$964				
Cost of substance abuse treatment	bl	\$366	\$928	\$1,165	\$1,063	\$1,351	\$552	\$2,072	\$3,196	\$920	\$2,822	\$546	10	677	2	*
	3-mo	\$165	\$1,068	\$141	\$410	\$1,599	\$315	\$436	\$212	\$419	\$752	\$612				
	6-mo	\$114	\$973	\$120	\$403	\$535	\$186	\$801	\$67	\$208	\$918	\$211				
	9-mo	\$400	\$420	\$83	\$485	\$343	\$1,497	\$990	\$764	\$618	\$669	\$213				
	12-mo	\$101	\$539	\$106	\$578	\$364	\$2,070	\$493	\$2,478	\$115	\$591	\$1,022				
Total health care cost	bl	\$4,920	\$2,419	\$5,607	\$4,384	\$9,884	\$5,026	\$9,757	\$5,903	\$10,838	\$5,614	\$10,572	10	837	3	**
	3-mo	\$7,092	\$3,614	\$2,021	\$2,823	\$4,513	\$4,190	\$3,715	\$5,630	\$8,393	\$7,469	\$6,022				
	6-mo	\$3,914	\$2,869	\$1,032	\$3,622	\$2,146	\$7,150	\$2,708	\$2,994	\$6,128	\$5,297	\$4,397				
	9-mo	\$4,864	\$1,073	\$1,673	\$2,518	\$1,174	\$4,827	\$2,431	\$2,600	\$6,033	\$3,014	\$4,130				
	12-mo	\$3,203	\$1,140	\$2,146	\$2,142	\$981	\$6,322	\$4,450	\$4,345	\$5,542	\$3,086	\$2,936				

* p<.05 ** p<.01 *** p<.001

Table 14. Client outcome changes by site (con't.)

													Type III Tests of Fixed Effects (main effect of site)			
		CHA	CHI	COL	DEN	FTL	LOS	MAR	NYC	PHI	POR	SAF	Num df	Den df	F	p
Inpatient care cost	bl	\$3,792	\$1,732	\$5,006	\$3,874	\$8,192	\$3,659	\$8,766	\$5,005	\$9,574	\$4,328	\$9,131	10	845	2	*
	3-mo	\$5,951	\$2,636	\$1,438	\$2,279	\$3,256	\$2,577	\$3,072	\$4,853	\$7,433	\$5,480	\$4,698				
	6-mo	\$2,968	\$2,348	\$468	\$3,052	\$1,202	\$5,930	\$2,070	\$2,449	\$5,294	\$3,843	\$3,036				
	9-mo	\$4,022	\$576	\$1,159	\$1,993	\$340	\$3,497	\$1,839	\$2,173	\$5,132	\$1,902	\$2,895				
	12-mo	\$2,272	\$748	\$1,627	\$1,645	\$193	\$5,401	\$3,993	\$3,785	\$4,835	\$2,131	\$1,988				
Outpatient care cost	bl	\$1,128	\$687	\$601	\$509	\$1,692	\$1,367	\$991	\$899	\$1,264	\$1,286	\$1,441	10	929	10	***
	3-mo	\$1,129	\$971	\$581	\$544	\$1,254	\$1,614	\$646	\$777	\$913	\$1,984	\$1,330				
	6-mo	\$942	\$525	\$563	\$562	\$934	\$1,226	\$601	\$545	\$835	\$1,426	\$1,398				
	9-mo	\$836	\$518	\$506	\$520	\$829	\$1,327	\$569	\$417	\$905	\$1,082	\$1,234				
	12-mo	\$932	\$401	\$510	\$495	\$783	\$915	\$453	\$564	\$694	\$948	\$956				

* p<.05 ** p<.01 *** p<.001

Table 15. Relationship between client outcomes and site

(Mixed model tests for main effect of site, adjusting for service use char's bivariately associated with each outcome)

Client outcomes	Type III Tests of Fixed Effect statistics			
	Num df	Den df	F	p
Days housed	10	860	7	***
Days homeless	10	781	5	***
Housed (own, else's or hotel)	10	814	13	***
Homeless	10	756	5	***
Housing satisfaction	10	542	8	***
Community integration	10	676	3	**
Knows any neighbors well.	10	774	3	**
Social support	10	659	10	***
Days in jail	10	741	2	*
Subjective quality of life	10	616	3	**
Any employment (past 30)	10	700	3	**
Employment income	10	1060	2	*
Any public support (past 30)	10	895	4	***
Public support income	10	604	4	***
Total income	10	584	5	***
SF-12 mental	10	661	5	***
BSI	10	632	8	***
Observed psychotic behavior	10	531	13	***
Satisfaction with primary treater	10	508	5	***
Days intoxicated	10	745	4	***
Any drugs	10	687	5	***
ASI alcohol	10	721	4	***
ASI drug	10	615	5	***
SF-12 physical	10	581	3	**
Trust in physician (1-5)	10	305	2	*
Cost of medical/dental treatment	10	903	0	n.s.
Cost of mental health services	10	1272	5	***
Cost of substance abuse treatment	10	789	1	n.s.
Total health care costs	10	1039	2	n.s.
Inpatient care costs	10	1018	2	n.s.
Outpatient care costs	10	754	4	***

* p<.05 ** p<.01 *** p<.001

Table 16. Relationship between client outcome and use of services (adjusting for site)

(Mixed Type III main effect coefficients & significance statistics for bivariate sign serv use measures, adjusting for site)

	Service use measure codes (1-19)																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Days housed	3.8*	n.s.	n.s.	n.s.		n.s.		n.s.	-8.1***			-2.5*	4.1**	-3.5*				3.6***	27***
% Housed		n.s.	n.s.	n.s.		-0.01**		n.s.	-0.1***				0.1***	n.s.			n.s.	0.03**	0.7***
% Homeless																			
Housing satisfaction			n.s.	n.s.						0.1***	0.1***		n.s.	n.s.	n.s.		n.s.	0.2***	n.s.
Commun integration		n.s.	0.01**	0.1**	n.s.			0.01*	0.3*			n.s.	n.s.	n.s.	n.s.		n.s.		
Knows neighbors well	-0.1**		n.s.	n.s.			n.s.			n.s.		n.s.	n.s.	n.s.				n.s.	n.s.
Social support	n.s.	n.s.	n.s.	0.03*					0.1**	0.04*		n.s.	n.s.		n.s.		n.s.		
Days in jail		-0.6*	n.s.																
QOL		n.s.	n.s.							0.2***	n.s.		n.s.	n.s.				0.2**	
% Employed		-0.05**			n.s.				0.04*		0.03**				n.s.				
Employment income	34*	n.s.			n.s.			n.s.						n.s.	n.s.		n.s.	n.s.	
% Receiving public assist.	n.s.		n.s.	n.s.	n.s.	n.s.	n.s.	0.002**				n.s.	n.s.	0.1**			n.s.		0.1**
Public assistance income	-141***	n.s.	n.s.	n.s.	n.s.						n.s.		n.s.	255***		n.s.	n.s.	n.s.	n.s.
Total income	-157***	50*	n.s.	n.s.	n.s.				n.s.		n.s.		n.s.	228***	n.s.			n.s.	n.s.
SF-12 mental	-1.7*	n.s.	n.s.		0.1*				n.s.	0.5**		n.s.			1.5**			0.9*	n.s.
BSI	n.s.			0.04***	n.s.				0.1*	-0.03*		0.1*					n.s.	-0.1**	-0.3*
Obs psych behav			-0.01**	n.s.	n.s.				n.s.	n.s.	-0.04***	0.03*	n.s.	0.1*	n.s.	n.s.	n.s.	n.s.	n.s.
Satisfaction with treater		n.s.							0.1*	0.6***	0.1***	n.s.		n.s.	n.s.			n.s.	n.s.
Days intoxicated		n.s.	n.s.														n.s.	n.s.	n.s.
Any drugs	n.s.	n.s.		n.s.	n.s.			0.004*	n.s.	-0.02**		n.s.	n.s.	n.s.		n.s.	n.s.	-0.04*	
ASI alc		n.s.	n.s.	n.s.					n.s.			n.s.						n.s.	
ASI drug		n.s.		n.s.	n.s.			0.001**	n.s.	-0.005**		n.s.	n.s.	n.s.		n.s.	n.s.	-0.01*	
SF-12 physical	n.s.	-1.3*	-0.3**	n.s.	-0.1*	n.s.			n.s.		n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Trust in physician	n.s.	n.s.	n.s.	0.03*					n.s.	n.s.	0.1*							0.1**	
Cost of med. treatment	n.s.			n.s.	118***	-1232*								1297*			n.s.		n.s.
Cost of mh treatment	n.s.	n.s.	n.s.	n.s.		1033***	112***	n.s.	730**			n.s.	-898**	696*	n.s.	97**			n.s.
Cost of sa treatment			n.s.	n.s.					1206***			374**					n.s.		n.s.
Total health care cost	n.s.	n.s.	n.s.	n.s.	163**		124*		1463*			n.s.	n.s.	2219*	-61*	215*	n.s.		n.s.
Inpatient care cost	n.s.		n.s.	n.s.	n.s.				n.s.			n.s.	n.s.	2199**			214**		
Outpatient care cost	-169*	n.s.	n.s.	n.s.	77***	n.s.	100***	n.s.	477***			98*	n.s.	n.s.	n.s.	---	n.s.	n.s.	n.s.

* p<.05 ** p<.01 *** p<.001 n.s. ... significant on bivariate analyses, but not on multivariate analyses; blank cell ... not significant on bivariate analyses, and therefore excluded from multivariate analyses

Legend for service use measure codes

1	Uninsured	11	Consumer choice scale
2	Has usual health care provider	12	Has primary case mgr
3	No. preventive procedures administered during past yr.	13	Visited by case mgr in commun (past 90)
4	No. health behaviors discussed with doctor for those with unhealthy behaviors	14	Has money manager
5	No. OP medical visits (past 90)	15	Any contact with landlord (past 90)
6	Has primary mh/sa treater	16	Total no. outpatient health visits (all kinds)
7	No. OP mh visits (past 90)	17	No. service providers
8	No. OP sa visits (past 90)	18	Coordination of services scale
9	Participated in AA/NA (past 90)	19	Overall svcs integration
10	Therapeutic alliance		

Table 17. Bivariate differences between CICH client and comparison group subjects at 5 sites (CHA, LOS, MAR, NYC and POR)

	CICH (N=296)		Comp (N=118)		t-test for Equality of Means		
	Mean	SD	Mean	SD	t	df	p
Category of homelessness							
Homeless 4+ periods past 3 yrs.	0.68	0.47	0.54	0.50	2.62	202	**
Race/ethnicity							
Asian/Pacific Islander	0.03	0.16	0.00	0.00	2.86	295	**
Work history (past 3 yrs.)							
Primarily unemployed	0.46	0.50	0.34	0.48	2.35	226	*
Access to healthcare (past 90)							
Uninsured	0.17	0.38	0.34	0.48	-3.45	179	**
Usual source of medical care	0.76	0.43	0.90	0.30	-3.74	298	***
No. service providers	4.73	3.35	3.69	3.45	2.80	211	**
Mental health diagnoses							
Diagnosed with bipolar disorder	0.37	0.48	0.12	0.33	5.76	297	***
Diagnosed with anxiety disorder	0.44	0.50	0.22	0.42	4.34	252	***
No. MH & SA diagnoses (0-11)	3.57	2.16	2.63	1.82	4.49	254	***
Supportive services (past 90)							
Recvd housing services	0.91	0.29	0.42	0.49	10.17	150	***
Recvd voc rehab services	0.13	0.33	0.25	0.43	-2.73	174	**
Recvd case mgr visit in commun.	0.52	0.50	0.04	0.20	13.74	412	***
Other							
Days hospitalized (past 90)	2.17	8.97	0.58	1.96	2.89	357	**
Religious faith scale (0-3)	1.90	0.87	2.14	0.86	-2.51	218	*

* p<.05 ** p<.01 *** p<.001

Table 18. Differences in use of services and outcomes between CICH clients and comparison group subjects (as of 11/8/06)

(Mixed models: LS means with group, time and group*time interaction terms; covariates = bl value of DV + 4 site dummy codes + 14 bl covar's in Table 17)

Service use	CICH clients (N=296)					Comparison group subjects (N=118)					group	time	group* time
	bl	3-mo	6-mo	9-mo	12-mo	bl	3-mo	6-mo	9-mo	12-mo	p	p	p
Uninsured	21%	13%	12%	14%	13%	24%	20%	23%	28%	21%	**	**	ns
Has usual health care provider	41%	46%	48%	52%	46%	46%	52%	46%	35%	40%	ns	ns	*
No. preventive procedures	7.8	8.2	8.3	8.6	8.6	8.0	8.4	8.1	7.9	7.4	ns	ns	ns
No. health behaviors discussed	3.3	3.5	3.6	3.9	3.9	3.5	3.7	3.4	3.3	3.4	ns	ns	ns
No. OP medical visits	3.0	3.2	2.3	2.4	2.2	2.7	2.7	2.7	1.4	2.2	ns	ns	ns
Has primary mh/sa treater	47%	55%	60%	55%	53%	41%	46%	36%	40%	30%	***	ns	*
No. outpatient mental health visits	2.4	3.4	2.8	2.4	2.6	2.0	2.0	1.9	2.2	1.7	ns	ns	ns
No. outpatient SA visits	7.3	8.8	7.4	5.7	4.8	7.8	7.6	5.9	6.5	4.6	ns	ns	ns
Participated in AA/NA	49%	45%	39%	37%	36%	45%	43%	31%	38%	23%	ns	***	ns
Therapeutic alliance	4.6	4.6	4.3	4.3	4.2	4.4	4.5	4.7	3.8	5.1	ns	ns	ns
Consumer choice scale	3.9	3.8	3.8	3.8	3.8	3.9	3.8	4.1	4.2	4.2	ns	ns	ns
Has primary case manager	36%	39%	21%	21%	19%	25%	27%	25%	19%	20%	ns	**	ns
Visited by case manager in commun.	47%	71%	70%	68%	65%	16%	22%	29%	31%	27%	***	***	*
Has money manager	8%	14%	11%	14%	15%	14%	14%	15%	18%	19%	ns	ns	ns
Any contact with landlord	65%	75%	76%	81%	89%	85%	56%	77%	79%	73%	ns	ns	ns
Total no. outpatient health visits	12.7	15.4	12.5	10.3	9.6	12.6	12.4	10.4	10.3	8.7	ns	*	ns
No. service providers	4.6	5.2	4.4	4.3	3.7	3.9	4.2	3.5	3.3	3.4	*	*	ns
Coordination of services scale	1.1	1.1	1.1	1.2	1.1	1.0	1.0	1.2	1.1	1.0	ns	ns	ns
Overall svcs integration	64%	79%	79%	77%	75%	59%	59%	58%	57%	56%	***	***	***
Outcomes													
Days housed	14	62	79	80	81	17	28	35	49	50	***	***	***
Homeless	23%	4%	3%	4%	5%	28%	15%	13%	12%	11%	**	***	ns
Housing satisfaction	4.0	4.1	4.0	3.9	3.9	3.4	3.7	3.6	3.8	3.5	ns	ns	ns
Commun integration	7.1	7.4	7.4	7.4	7.4	6.9	7.7	7.0	6.3	7.1	ns	**	*
Knows any neighbors well	39%	67%	76%	78%	70%	61%	31%	75%	52%	49%	ns	ns	ns
Social support	1.5	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.3	1.3	ns	ns	ns
Days in jail	1.5	1.3	1.4	1.4	1.0	2.3	0.5	4.0	0.5	2.1	ns	**	*
Subjective quality of life	4.3	4.6	4.7	4.5	4.6	4.1	4.6	4.6	4.5	4.2	ns	**	ns
Any employment	21%	22%	20%	23%	19%	22%	21%	28%	17%	10%	ns	ns	ns
Employment income	\$58	\$70	\$68	\$91	\$88	\$31	\$93	\$143	\$105	\$136	ns	*	ns
Any public support	76%	81%	82%	82%	78%	76%	75%	71%	73%	76%	ns	ns	ns
Public support income	\$317	\$411	\$441	\$493	\$484	\$327	\$344	\$348	\$392	\$408	*	***	ns
Total income	\$412	\$515	\$557	\$636	\$626	\$421	\$525	\$600	\$609	\$662	ns	***	ns
SF-12 mental	38.2	40.0	40.7	40.8	40.2	39.1	40.3	40.4	41.6	41.1	ns	**	ns
BSI	1.6	1.4	1.4	1.3	1.3	1.5	1.4	1.4	1.4	1.4	ns	**	ns
Observed psychotic behavior	0.26	0.24	0.24	0.27	0.29	0.30	0.26	0.25	0.24	0.31	ns	ns	ns
Satisfaction with primary treater	5.3	5.1	5.1	5.0	4.9	5.2	5.1	5.2	4.7	5.3	ns	ns	ns
Days intoxicated	1.5	1.1	1.6	1.6	2.0	2.3	0.9	2.1	0.9	1.5	ns	*	ns
Any drugs	41%	38%	35%	37%	41%	44%	43%	35%	35%	32%	ns	ns	ns
ASI alcohol	0.11	0.09	0.09	0.10	0.11	0.11	0.09	0.10	0.11	0.10	ns	ns	ns
ASI drug	0.07	0.05	0.05	0.05	0.06	0.07	0.05	0.05	0.04	0.04	ns	**	ns

SF-12 physical	43.5	42.8	42.7	42.9	43.0	42.8	43.0	43.6	44.2	43.1	ns	ns	ns
Trust in physician	3.7	3.8	3.8	3.6	3.7	3.7	3.8	3.7	3.6	3.7	ns	ns	ns
Cost of medical/dental treatment	\$3,148	\$2,811	\$1,967	\$1,698	\$2,191	\$1,926	\$2,082	\$2,468	\$1,813	\$1,788	ns	ns	ns
Cost of mental health services	\$1,330	\$1,920	\$1,706	\$634	\$912	\$1,795	\$1,352	\$1,291	\$1,189	\$1,213	ns	ns	ns
Cost of substance abuse treatment	\$1,653	\$332	\$392	\$868	\$1,110	\$764	\$1,288	\$1,205	\$305	\$983	ns	ns	**
Total health care cost	\$6,156	\$5,080	\$4,073	\$3,202	\$4,127	\$4,433	\$4,717	\$4,929	\$3,540	\$4,036	ns	ns	ns
Inpatient care cost	\$5,111	\$3,868	\$3,127	\$2,343	\$3,396	\$3,464	\$3,766	\$4,047	\$2,960	\$3,393	ns	ns	ns
Outpatient care cost	\$1,044	\$1,206	\$938	\$841	\$725	\$979	\$950	\$885	\$570	\$649	ns	**	ns

* p<.05 ** p<.01 *** p<.001