

The University of New Mexico

City of Albuquerque Heading Home Initiative Cost Study Report Final

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INTRODUCTION

The Albuquerque Heading Home (AHH) Initiative seeks to target the most vulnerable individuals within the homeless population. The program is designed to offer immediate housing to eligible persons referred from case management agencies, who self-refer, and who are identified and recruited through an outreach program. This process is described later and is based on the Housing First model. Such individuals, who have co-occurring behavioral health problems and a history of substance abuse, must meet as many as three criteria to qualify for the Heading Home program: 1) They must provide proof of homelessness, 2) they must provide proof of low-income, and 3) they must, depending on the source of the housing voucher, provide proof of a behavioral health disorder.

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), chronic homelessness refers to an "individual who has been continuously homeless for a year or more or has experienced at least four episodes of homelessness in the last three years and has a disability" (U.S. Department of Housing and Urban Development, 2012). Such individuals, in addition to those with high Vulnerability Index (VI) scores, are considered to be the most vulnerable. Developed by Common Ground, the VI is an instrument which measures and identifies the most vulnerable homeless persons. The VI features a series of variables designed to enable staff or volunteer members to quantify the degree of an individual's risk of serious injury, illness, and death. The index scores account for the length of homelessness, the time spent on the streets, and the mental and physical status of the individual (Moreno, 2012).

As of late September 2014, the AHH Initiative had surveyed over 1,400 individuals sleeping on the streets or in shelters using the Vulnerability Index (AHH, 2013). AHH discontinued using the VI in September 2014 and since then has been using the VI-SPDAT. The VI-SPDAT combines the Vulnerability Index with the Service Prioritization Decision Assistance Tool (SPDAT). A more complete description of the VI-SPDAT can be found at: http://100khomes.org/blog/introducing-the-vi-spdat-pre-screen-survey. According to AHH program records as of late September 2015, a total of 407 individuals had been housed. Of that number 250 were at that time currently still housed, 33 were deceased, 34 had been successfully discharged, 67 had been unsuccessfully discharged, and 23 had been lost to contact. The program began on January 31, 2011 and the program accepted its first client on February 1, 2011. Ultimately, this research is designed to study the costs before and after the provision of housing for the most vulnerable chronically homeless persons in Albuquerque, New Mexico who have become housed in the Albuquerque Heading Home Initiative.

A first phase report completed in September 2013 with a one-year study time pre- and posthousing period with 48 AHH clients who became study group members found one-year postHeading Home study group member costs were 31.6% less than the one-year pre-Heading Home study group member costs (Guerin, et. al, 2013). This phase of the study includes 95 study group members and expands the study time frame up to 4 years.

LITERATURE REVIEW

Based on some of the most recent national data on homelessness, on a single night in January 2015, approximately 564,708 people were experiencing homelessness in the United States. It is estimated that of these individuals, 100,000 are chronically homeless, and tend to have disabling health and behavioral health problems. Estimates suggest that at least 40% have substance use disorders, 25% have some form of physical disability or disabling health condition, and 20% have serious mental illnesses; often, individuals have more than one of these conditions. These factors contribute not only to a person's risk for becoming homeless, but also to the difficulty he or she experiences in overcoming it. (U.S. Department of Housing and Urban Development, 2015, SAMHSA, 2016).

Consequently, the most vulnerable individuals experiencing chronic homelessness tend to be the highest users of community services, such as emergency room visits, inpatient treatment services and outpatient treatment services. Homeless populations are often uninsured and face significant barriers when accessing healthcare. As a result of this factor many homeless individuals will resort to using emergency rooms for non-emergency medical needs, such as an acute injury, alcohol or drug use, or psychiatric issues. In comparison, homeless individuals are three times more likely to use an emergency room than non-homeless individuals, and were three times more likely to have undergone an evaluation within the three preceding days, and were more than twice as likely to involve a return after hospitalization within the previous week (The U.S. Department of Housing and Urban Development, 2010). Vulnerable individuals experiencing chronic homelessness also typically require more acute care. The issue is that in many cases, hospitals must provide acute services for preventable conditions which are exacerbated by the circumstances of homelessness. Within communities, criminal justice systems are also impacted by homelessness. Many arrests involving homeless populations are a result of relatively petty, victimless offenses, or are actions from the conditions of being homeless (i.e. entering vacant buildings). Arrests within the homeless population can also be explained as a survival strategy, while others may be a result of inadvertent or uncontrolled behavior (Speiglman & Green, 2002). A large proportion of this population is considered vulnerable to arrest in consideration to individuals with mental illnesses, or substance abuse problems (Speiglman & Green, 2002). Moreover, it is not uncommon for homeless individuals to spend time in jail for minor violations of the law, such as sleeping in public, hampering the law force's ability to focus on high-risk criminals (Gaetz, 2012). Findings suggest the relationship between homelessness and jail is bi-directional, meaning "people who are homeless are much more likely to be arrested and in jail than those who are housed, and without adequate

discharge planning and supports, people in prison are more likely to become homeless upon release" (Gaetz, 2012). Research data regarding people incarcerated in prisons and in jails shows that 10% were homeless prior to incarceration, and 20% of the incarcerated population with mental illnesses were previously homeless (SAMHSA, 2016). Ultimately, research has shown the heavy use of these services places a substantial financial burden on the community, and can amount to upwards of millions of dollars per year. In fact, Albuquerque spends 20 million dollars annually to provide homeless services to individuals and families. (Perlman & Parvensky, 2006; Mondello et al., 2007).

Existing literature focuses on what supportive housing is, how it works, and for whom it works best. This includes the best practices of supportive housing, target client population, community outcomes and client outcomes. Both monetary and non-monetary 'outcomes' have been and continue to be studied, and are often described as either 'beneficial' or 'costly'. While monetary outcomes may include the cost of homelessness or the cost of housing clients, non-monetary outcomes could include the changes in mental and physical health or change in quality of life for housed clients (Waegemakers & Rook, 2012). A large body of literature focuses on studying both monetary and non-monetary benefits and costs. Ultimately, researchers are addressing the challenge of responding appropriately and compassionately to a problem that harms individuals, families and communities, while saving money.

Clearly, this is a complex issue, and further study is necessary. To have a comprehensive body of literature, more needs to be understood about the various costs and benefits of supportive housing, for both the individual experiencing homelessness and the community (Culhane et al, 2011; Culhane et al., 2007; Flaming et al., 2009; Perlman & Parvensky, 2006). The next portion of the literature review will consist of a brief background overview, and a broad discussion of the existing themes within literature surrounding the cost and benefits of supportive housing.

Background

It is believed that Housing First has origins from three founding programs: Houselink (1977), Beyond Shelter (1988), and Pathways to Housing (1992). The three founding programs were originally based on rapid re-housing through permanent means rather than the use of shelters. While the three programs view Housing First differently, they were all based upon the values that housing was and continues to be, a right. Today, there are several distinctive program models addressing the problem of chronic homelessness. Such programs tend to have overlapping features; however, their specific characteristics are often dependent upon the needs of the population being served. Albuquerque Heading Home is based on the Housing First model. Transitional Housing, often thought of as a "traditional" program, is intended to provide a pathway between homelessness and permanent housing. Generally, individuals are able to utilize transitional housing for up to 24 months. Transitional housing programs typically provide supportive services to individuals who do not have a history of severe mental and behavioral health issues or chemical dependencies. It is not uncommon for such programs to require sobriety or admittance to a treatment program in order to receive supportive services; in such instances, housing is contingent upon compliance of the requirements.

The Housing First model is designed to provide immediate independent permanent housing and individualized supportive services, such as mental health services, medical care, and supportive case management. Commonly, these services are provided by an Assertive Community Treatment (ACT) team of social workers, nurses, psychiatrists, vocational and substance abuse counselors, peer counselors, and other professionals. Consistent with the principles of the harm reduction approach, the Housing First model recognizes the necessity for each individual to receive personalized treatment. A main feature differentiating the Housing First model from that of others is its lack of pre-conditions. The Housing First model does not require that the individual be sober or enrolled in a treatment program.

About the Population

Research studies have focused on a generally wide variety of populations. Existing literature covers single adults and families experiencing homelessness, either periodically or chronically. Families experiencing homelessness generally report having difficulty accessing specific resources, such as finding or maintaining a job or finding affordable housing. It is estimated that families experiencing homelessness make up 37.4% of the total homeless population (Annual Homeless Assessment Report (AHAR) 2015). In contrast, individuals experiencing chronic homelessness generally have a diagnosable mental illness, chemical dependence or dual diagnosis. Many of which are disabled or suffer from chronic health problems and subsequently report being unemployed. While some similarities may exist, these two groups of individuals clearly differ in many ways and require different supportive services. On the whole, families requiring fewer supportive services are significantly more successful in transitional housing models. On the other hand, chronically homeless individuals require more supportive services and typically have better success in permanent supportive housing, specifically Housing First models.

Best Practices

With the wide-spread adoption of Housing First models by diverse communities, practitioners are now questioning whether the approach could be considered a "best practice". Naturally, researchers dispute whether or not the supporting evidence is valid, reliable, or comprehensive. Some research, such as in Waegemakers & Rook (2012), argue that the emergence of

supportive housing was "fueled by some scientific evidence," such as high retention rates found in quantitative research designs, but was not actually evidence-based. In contrast, research designs which use a qualitative methodology may find more abstract yet important indicators of outcome success, such as quality of life.

Community & Client Outcomes

Cost-Effectiveness

A large portion of the existing literature is dedicated to evaluating the cost-effectiveness of supportive housing, specifically Housing First models. Research reports such as Pathways to Housing program (Gulcur, et al., 2003; Tsemberis et al., 2004), the REACH program that uses "Full Service Partnerships of Housing and Support Services" (Gilmer, et al., 2010; Gilmer, et al., 2009) and San Diego (Buchanan et al., 2009; Gilmer et al., 2009) all yield a small cost savings in the HF approach (Waegemakers & Rook, 2012). Unfortunately, cost studies tend to fall short due to the difficulty of data acquisition. Oftentimes, such studies are only able to provide analysis of one or two basic costs, such as shelter use or mental health care. For example, the Denver Housing First Collaborative Cost Benefit Analysis & Program Outcomes Report (Perlman & Parvensky, 2006) only provides cost analysis of health and emergency service records. Despite the numerous conflicting opinions about supportive housing and cost-effectiveness, there seems to be a general consensus that such results are ultimately incomplete.

Lastly, there are various research findings that indicate supportive housing is cost-effective, or at least cost-neutral, with specific populations. Dionne Miazdyck-Shield of Saskatoon Housing Initiatives Partnership (SHIP) suggests "the studies on cost reduction apply specifically to chronically homeless people with a mental illness who are the heaviest users of services". In other words, quantitative outcomes, such as cost savings, are seen most often within the most vulnerable populations using the Housing First supportive housing model.

Improving Health and Stability, Reducing Costs

Research suggests that the unpredictability and instability associated with homelessness interfere with the individual's ability to maintain healthy and balanced lifestyles. The provision of housing therefor does not only represent a tangible and physical structure of support, but also an emotional and social system of support. Burns and Flaming (2012) suggests supportive housing results in the establishment of dependable and stable support systems, and the regular utilization of physical and behavioral health services. In addition to allowing the individual to lead a more balanced and secure life, it also reduces the costs shouldered by the community. He states, "Costs decrease markedly when individuals gain access to affordable housing with services (permanent supportive housing). Costs decline because permanent supportive housing and ongoing, on-site access to physical and behavioral health services greatly increase

individuals' level of stability and greatly reduces the frequency and severity of crises in their lives" (Burns, Flaming, 2012, P.17). Additionally, many of these individuals suffer from mental and behavioral health difficulties, and consequently require more public care and supportive services. Stephen Gaetz explains that, "supportive housing models are a much more cost effective option for chronically homeless people with serious mental illness and addictions, because the cost of housing is substantially offset by the reduced use of acute care services when people have stable housing and on-going support" (Gaetz, 2012).

Individuals experiencing chronic homelessness typically depend on public services on a frequent basis. Moreover, chronically homeless individuals tend to suffer from mental health problems, or medical health problems, and many suffer from both. Consequently, these individuals, who are considered to be extremely vulnerable, are generally the heaviest users of public services. There is a large body of research which has shown that supportive housing for the chronically homeless is beneficial in several ways. Furthermore, research has shown that permanent supportive housing, such as Housing First programs, produce positive and cost-effective outcomes for both the individual who experienced homelessness, and the community. Previous research on the effectiveness of these types of programs (Larimer, Malone, Garner, et al., 2009; Sadowski, Romina, Tyler, VanderWeele, et al., 2009; Perlman and Parvensky, 2006; Mondello, Gass, McLaughlin and Shore, 2007; and Walsh, Duncan, Selz-Campbell, and Vaughn, 2007) has generally shown that programs similar to Heading Home are associated with a relative decrease in costs. Previous research studies have contributed invaluable data, allowing researchers today to take the next step in better understanding supportive housing, the individuals who depend on such systems, and the future implications of their findings, such as creating a sustainable system of housing the homeless. After all, it has already been suggested that emergency services like supportive housing are only remedial and have little effect on the long-term cycle of homelessness. Alternatively, prevention programs offer the possibility to end homelessness.

METHODOLOGY

This study followed generally accepted guidelines for conducting this type of cost study. This section describes the data sources and methods used to complete this study and measure the costs of the Heading Home Initiative.

This study focuses on a cost analysis that compares the cost of a wide variety of different services, which are described later for standardized time periods before study group members entered the Heading Home Initiative program to the cost of services after study group members entered the Heading Home Initiative program for a similar time period. The cost-effectiveness analysis is a reliable and valid framework to assess the costly problem of chronically homeless individuals and their heavy use of public services, while acknowledging the existence of

intangible costs. This study uses two methods to study and measure the cost effectiveness of the Heading Home Initiative, an interview and a record review. We rely primarily on the record review. These methods are described in more detail later.

As an adjunct to the cost analysis we also provide a brief return on investment (ROI) analysis. This is simply another method to present the information in a slightly different way. ROI is a method to measure the rate of financial return adjusted for the size of the investment or cost of implementing something. ROI is typically used in marketing decisions and relies on financial gain. Social return on investment (SROI) is an extension of ROI and attempts to include the measure of benefits outside of financial gains, including social values relative to invested resources. Our analysis does not attempt to measure any benefits outside of the financial benefits. In its most simple form the "return" (net profit) is divided by the resources that were used (investment).

Return on Investment (ROI) = Returns / Investments.

In our analysis we measure the ROI by first calculating the difference between the pre-study costs and post-study costs. From the difference between the pre-study costs and post-study costs we subtract the program costs and then divide this number by the cost of implementing the program in the post-study period.

Return on Investment (ROI) = (post-study costs – pre-study costs) – (program costs) / program costs.

The Heading Home Initiative also provided us access to information collected from their Vulnerability Index (VI) Survey. The VI is used in homeless enumeration counts in numerous locations in the United States and it is designed to identify and prioritize the homeless population for housing based on their health. This survey provided information on vulnerability, length of time lived on the street, homelessness in the past three years, health status, substance abuse history mental health, insurance, veteran status, gender, race/ethnicity, citizenship, and highest grade completed. Importantly the VI can be used to provide a measure of vulnerability of the Heading Home Initiative target population, the population housed under the initiative, and our study group. AHH discontinued using the VI in September 2014 and since then has been using the VI-SPDAT. The VI-SPDAT combines the Vulnerability Index with the Service Prioritization Decision Assistance Tool (SPDAT).

These data were used to describe the client population and compare our study group to the total population of homeless individuals who were assessed with the VI. Heading Home client enrollment data was also used to select the clients eligible to become study group members.

Client Recruitment

After potential study group members were identified as eligible, based upon their housing date, ISR study staff recruited them to become study group members. The recruitment process included the use of a letter and flyer and required the help of Heading Home Initiative staff. Study group members were recruited to participate in both parts of the study (interview and official data).

Because of the length of the recruitment period and the number of potential study group members the recruitment of study group members was divided into "waves" or groups. In total, during the 35 months of recruiting we recruited 95 study group members in 6 waves. We recruited our first study group member on September 22, 2012 and the last study group member on August 28, 2015.

Table 1 provides the total number of clients eligible for recruitment, the number of clients recruited, the number of individuals we were unable to contact, and the number of individuals who declined to participate.

For this study we attempted to recruit approximately 320 clients who were eligible to become study group members. We were able to recruit 95 study group members. We were unable to make contact with 223 potential study group members and two individuals we contacted declined to participate. Recruitment is described in more detail later.

Table 1. Clients Eligible for Recruitment		
Total Clients Eligible	320	
Recruited	95	
Unable to Contact	223	
Declined to Participate	2	

Potential study group members were able to either contact ISR staff using listed phone numbers to enroll in the study and schedule and complete a baseline interview and consent providing access to their official records, or ask their Case Manager to arrange an appointment with us. This method allowed potential study group members to voluntarily choose to contact us or not contact us. At approximately the same time, flyers were delivered in person or to the addresses of potential study group members who did not respond to the initial letter. The process was intended to provide potential study group members sufficient opportunity and time to decide to voluntarily participate. These extra steps were taken to attempt contact with potential study group members because we believed individuals would be interested in participating, and we did not want potential study group members to be missed.

During the initial stages of recruiting study group members several issues surfaced. First, we discovered that sometimes some pieces of information useful for recruiting study group members was lacking. This included complete addresses for mailing letters and delivering flyers. Second, we discovered the program did not always have complete information on the agency case managing the client and/or the case manager if the agency and/or case manager were not one of the four case managers contracted to the Heading Home Initiative. Third, we discovered the program was at times missing housing dates for clients. This was an important issue, because we used the housing date to determine who had been housed a minimum of one year and hence was eligible. After beginning recruitment several other issues arose. This primarily centered on our inability to accurately track who had been mailed a letter and who had received a flyer from the AHH program staff or contracted staff that were responsible for initially informing AHH clients of the study and their eligibility. For this reason, it was difficult, with certainty, to know which potential study group members had actively been recruited. For these reasons recruiting study group members took longer than anticipated, resulted in a smaller number of study group members than planned, extended the completion of the study, and meant we had a shorter follow up time period than originally planned on a subset of study group members.

We were able to successfully enroll AHH clients who contacted us expressing willingness to participate in the study. Only two potential study group members declined to participate after contacting us.

Client Interview

This method focused on an interview with study group members, who consented to take part in this portion of the study. Clients who had been housed approximately one year were eligible to participate. Collected data includes questions about military service (to determine if study group members were veterans), medical status, employment/support status, legal status, drug/alcohol use, family/social relationships, psychiatric status, and length of time lived in Albuquerque, date of birth, and race/ethnicity.

All client interviews were completed in one session, and took between 45-60 minutes and occasionally longer to complete. The location of the interview was agreed upon at the time the interview was scheduled. Locations include public locations, such as cafes and fast food restaurants, our offices, and private residences, most often the clients' apartment. The vast majority of the interviews occurred at the clients' apartment. At or around the scheduling time of the interview, the case manager was able to communicate any concerns or issues regarding the client, which sometimes influenced how and where the interviews were scheduled. Additionally, depending on the case manager's recommendation and other factors, interviewers were able to request that a second staff member accompany them to the interview to act as an observer. Because a majority of the interviews were scheduled with the client directly and contact with case managers was limited, ISR staff was not always notified of any possible concerns or issues regarding study group members. In a small number of instances, interviews were not completed due to unforeseen circumstances regarding the study group members' willingness to participate and unusual behavior.

Event History Calendar (EHC)

An essential aspect of the interview included a retrospective life experiences count data collection section that was designed to provide data, such as housing status, emergency room use, inpatient hospital use [medical and behavioral health], and outpatient medical/mental health/substance abuse services use, for an approximately two-year period prior to the date the study group member enrolled in the AHH program. This information was intended to supplement the data described in the next section. The interview is attached as Appendix A.

Record Review

This method relies on the collection of service and cost data collected and maintained by various agencies. This includes emergency room, inpatient medical, inpatient behavioral health, outpatient medical, outpatient behavioral health, detoxification services, ambulance services, fire department response services, Assertive Community Treatment (ACT) services, jail bookings, case management, and shelter utilization. We also collected local arrest histories to document the number of arrests pre- and post-housing.

For the record review, we contacted participating agencies to request service and cost information for study group members. Our goal was to recruit all four large local hospitals, the local county detention center, the City of Albuquerque and Bernalillo County substance abuse treatment agencies, the agency that provides ambulance transports, all local emergency shelters, local law enforcement agencies for a count of arrests, and other agencies that provide a variety of services (i.e. case management services, social services, medical/dental services, substance abuse treatment services, and nursing services).

The initial communication was used to describe the study, answer any questions, discuss what information they might be able to provide, explain our human subject review, and find out how they store and maintain individual level information. Every agency we contacted agreed to collaborate and most of these agencies were able to provide requested information in time to be included in this study. Participating agencies collect and maintain service and cost date in a variety of formats, mainly electronic automated formats or in hard copy paper files. We were provided service and cost data in primarily electronic formats. Because service and cost data was provided in a variety of formats it was necessary to systematically organize these data into a single format for this study. All of these data are stored in a secure database system. Hard copy data was automated in the secure database.

The cost data we received from participating agencies varied. A number of agencies were able to provide actual costs per service. Several other agencies provided an average cost per service by either fiscal year or calendar year. A few agencies were only able to provide cost data for the most recent fiscal year or calendar year and then we used an inflation calculator to either increase or decrease the costs provided for the remaining time period. From hospitals we received charges and not costs. Charges are typically the listed price for a hospital service and costs are the actual money that the wide variety of payment sources (i.e. private insurers, Medicaid, Medicare, private pay, and other government sources) end paying to hospitals in exchange for the provided care. The charges often do not match the costs.

Table 2 provides the types of data we were seeking to access with additional detail regarding the information and agencies from January 2000 through approximately September 2015.

Table 2. Official Data Collection			
Type of Data	Requested Information	Agencies	
Jail bookings	Booking date, release date, and booking charges	Bernalillo County Metropolitan Detention Center	
Substance abuse treatment	Assessment date and results, any referral information to other substance abuse treatment providers, detoxification services, case management services, number and type of services, and cost of services	Albuquerque Metropolitan Central Intake, Bernalillo County Metropolitan Assessment Treatment Services, Albuquerque Health Care for the Homeless	
Ambulance pickups and transports	Date of pickup, location of the transport, and cost of service	Albuquerque Ambulance Service, Albuquerque Fire Department, and Bernalillo County Fire Department	
Emergency room, inpatient, outpatient, and clinic medical and mental health services	Begin date of service, end date of service, number and type of services, cost of services	University of New Mexico Hospital, University of New Mexico Psychiatric Center, Presbyterian Hospital, Lovelace Hospital	
Arrests	Date(s) of arrest and charge(s)	Albuquerque Police Department and Bernalillo County Sheriff's Department	
Emergency shelter	Date(s) of sheltering and cost per day	Albuquerque Opportunity Center, Albuquerque Rescue Mission, Brothers of the Good Shepherd, and Barrett House	
Meal Sites	Date(s) of any meal, the meal type (breakfast, lunch, dinner), and the cost of the meal	Project Share, Albuquerque Rescue Mission, Brothers of the Good Shepherd, and Noon Day	
Other services	Ancillary services that could include case management services, social services, medical/dental services, and nursing services.	Albuquerque Healthcare for the Homeless, St. Martins Hospitality Center, Assertive Community Treatment teams	

Follow-Up Interview

Our study included a follow-up interview, conducted approximately 12 months after the intake interview. As clients became eligible, they were asked to complete the follow-up interview, which took approximately 15 minutes. The follow-up interview included quality of life questions, satisfaction with services, and indicators of social stability. Several of the same issues that were discussed in the Client Recruitment section of this report surfaced when attempting to schedule clients for their follow up interviews. Again it was unclear whether the Heading Home Initiative

had an up to date database of contact information for each client, reflecting new addresses, contact numbers, or if they were still housed. Second, it was not clear if the program had an accurate list of case managers and to which clients they were assigned.

The total number of clients, who completed the follow up interview overtime, was small in comparison to the total number of clients who were eligible to complete a follow up interview. There were a number of reasons why this happened. This included such factors as eviction, death, incarceration, unwillingness to further participate, and study group members who could not be located. The data reported in Table 3 shows the client count and study total for the following categories: total clients eligible, interviewed, and total clients eligible, but not interviewed. The follow-up interview is attached as Appendix E.

Table 3. Eligible Clients for Follow Up Interview				
Client Type Study Total Percent				
Total Clients Eligible	69	100		
Interviewed 25 36.2				
Total Clients Eligible, but not interviewed4463.8				

Almost 64% of the 69 study group members eligible for a follow up interview did not complete this aspect of the study. While ISR staff was made aware that some of these study group members were no longer housed through the Initiative and/or had been discharged (successfully or unsuccessfully) had been lost to contact, or were deceased we were unable to distinguish the housing status of the remaining 17 clients, who were eligible for a follow up interview. Table 4 lists the last known status of each study group member who did not complete a follow up interview. Because of the transient nature of this population and our study group members, it is important to note this was a difficult population to track and locate for the follow up interviews.

Table 4. Eligible clients who did not complete a follow up interview		
Client Status	Count	
Unsuccessful Discharge (Evicted/Abandoned Apartment, non- compliance, jail)	13	
Successful Discharge (Moved out of city/state, self-housed)	6	
Deceased	6	
Declined to further participate	2	
Status Unknown	17	

Adjusting Costs from Previous Years and the Current Year

In order to compare the cost of care provided to study group members in previous years to the current year it was necessary to normalize the costs. A 2009 Wall Street Journal (WSJ, 2009) article noted that after Medicare and Medicaid were established in 1965 and the cost of medical care has inflated 2.3 times faster than any other cost in the economy. In a 2011 report released by the United States Department of Labor Bureau of Labor Statistics (BLS) the inflation rate of medical costs was reported to have risen 3.0% compared to 2.1 % for all items (BLS CPI, 2011). The inflation rates reported by BLS and WSJ both agree that medical costs inflate at a greater rate than the inflation rate of the consumable dollar (BLS CPI, 2011; WSJ, 2009).

For this study we used a medical Consumer Price Index inflation calculator from the Bureau of Labor Statistics (BLS) to normalize medical costs and a consumer price index calculator from the BLS to normalize costs that were not medical costs.

STUDY SAMPLE DESCRIPTION

This section describes the study sample. As noted earlier, since the program began on January 31, 2011 407 clients had been enrolled through late September 2015. We attempted to enroll approximately 320 clients who met the eligibility criteria for our study based on AHH housing records and were able to enroll 95 clients as study group members (see Table 1).

Vulnerability Index (VI) Data Findings

This section describes the population of individuals screened using the VI and compares them to those individuals who became clients.

Table 5 shows the differences between the clients housed by AHH and those that have been identified as homeless, but not yet housed on both vulnerability measures and demographic variables. Individuals who become AHH clients were overwhelmingly more vulnerable than those that did not become part of the AHH Initiative. The average 8-point overall vulnerability rating for housed clients (2.72) is over 1.5 points higher than that for those who were identified as homeless, but not provided housing (1.19). Furthermore, we see that those housed by AHH

are significantly more vulnerable on all of the measures except whether or not the individual has been to the ER in the last year and the percent with some form of health insurance. Specifically, AHH clients are more likely to have a higher tri-morbid rating, to have been to the ER more times in the past three months, and to have a serious health condition. Additionally, those not yet housed are less likely to use illicit substances, to have been a victim of an attack while homeless, and to have a permanent disability. These results provide evidence that AHH is providing housing to the more vulnerable individuals. In the process of collecting VI data, ISR staff found four study group members, who had been housed for over one year and were not listed on any VI databases, and six study group members did not have tri-morbid ratings. It is unclear if this is an error, or if these study group members were never interviewed prior to being housed. The bottom half of Table 5 examines the differences in the demographic variable means across the housed and homeless populations. In general, these results show there are no significant differences across the two groups except for age at start of homelessness and overall age. This finding is encouraging because it suggests that demographic factors and other factors not directly linked to vulnerability are not impacting housing decisions.

	Housed	Homeless	Difference (Housed - Homeless)
Vulnerability Measures			
Overall Vulnerability Rating	2.72	1.19	1.53 ***
Tri-Morbid Rating	0.70	0.38	0.32 ***
Number of Times Been to ER (Last 3 Months)	0.72	0.31	0.40 ***
% Been to ER in Last Year	0.95	0.96	0.00
% With Serious Health Condition	0.93	0.69	0.25 ***
% Any Substance Use	0.85	0.77	0.08 *
% Frequent Substance Use	0.72	0.31	0.40 ***
% With Mental Health and Substance Abuse	0.73	0.52	0.22 ***
% With Any Mental Health Problems	0.85	0.63	0.21 ***
% Have Been Victim of Attack Since Homeless	0.66	0.50	0.16 ***
% With Permanent Disability Limiting Mobility	0.56	0.33	0.23 ***
% With Some Form of Health Insurance	0.76	0.62	0.15 ***
Demographic Information			
Age at Start of Homelessness	41.98	39.13	2.85 **
Age	50.87	46.19	4.69 ***
% Female	0.37	0.34	0.03
% African American	0.12	0.11	0.01
% Hispanic	0.29	0.27	0.01
% Native American	0.12	0.16	-0.04
% White	0.40	0.35	0.05
Education Level (5-point scale)	3.09	3.06	0.02
Times Homeless & Housed Again (Last 3 Years)	1.26	1.42	-0.15
Number of Days Homeless	3403.34	3612.20	-208.86
% Most Frequently Sleep – Other	0.20	0.24	-0.04
% Most Frequently Sleep – Shelters	0.44	0.38	0.06
% Most Frequently Sleep – Streets	0.36	0.37	-0.02
% Ever Been in Jail	0.85	0.81	0.04
% Ever Been in Prison	0.29	0.28	0.01
% Served in the Military	0.16	0.17	-0.01

 Table 5. Comparing Differences in Vulnerability Measures and Demographic Means between the

 Clients Housed by AHH and Those Identified as Homeless

Note: * p<0.05, ** p<0.01, *** p<0.001

Table 6 reports the differences between the all AHH housed clients and our study group members on vulnerability measures and demographic variables. This analysis is used to examine whether the results obtained from the sample of interviewed clients can reasonably be generalized to the total population of housed individuals. Only one out of the twenty-eight variables is significantly different between the two groups. Consequently, these results provide evidence that our study group members are representative of the total population of housed individuals. For this reason, we believe it is reasonable to consider applying the average cost savings generated for this study to each study group member. This is an important finding.

	Housed: and	Difference (Study	
	Study Group	Not Study Group	Group – Not
	Members	Members	Study Group)
Vulnerability Measures			
Overall Vulnerability Rating	2.69	2.74	-0.05
Tri-Morbid Rating	0.75	0.68	0.07
Number of Times Been to ER (Last 3 Months)	0.75	0.70	0.05
% Been to ER in Last Year	0.98	0.94	0.04
% With Serious Health Condition	0.96	0.92	0.04
% Any Substance Use	0.88	0.84	0.04
% Frequent Substance Use	0.75	0.70	0.05
% With Mental Health and Substance Abuse	0.77	0.72	0.05
% With Any Mental Health Problems	0.85	0.85	0.01
% Have Been Victim of Attack Since Homeless	0.52	0.72	-0.20 *
% With Permanent Disability Limiting Mobility	0.50	0.58	-0.08
% With Some Form of Health Insurance	0.75	0.77	-0.02
Demographic Information			
Age at Start of Homelessness	43.88	41.22	2.66
Average Age	52.27	50.31	1.96
% Female	0.40	0.36	0.03
% African American	0.09	0.13	-0.04
% Hispanic	0.36	0.26	0.11
% Native American	0.13	0.11	0.02
% White	0.36	0.42	-0.06
Education Level (5-point scale)	3.15	3.06	0.09
Times Homeless & Housed Again (Last 3 Yrs)	1.33	1.24	0.10
Number of Days Homeless	3,057.42	3,545.26	-487.84
% Most Frequently Sleep – Other	0.15	0.22	-0.08
% Most Frequently Sleep – Shelters	0.48	0.42	0.06
% Most Frequently Sleep – Streets	0.38	0.35	0.02
% Ever Been in Jail	0.88	0.84	0.03
% Ever Been in Prison	0.23	0.32	-0.09
% Served in the Military	0.08	0.20	-0.11

Table 6. Differences in Vulnerability Measures and Demographic Means between Clients Housed and Not Interviewed and Those Housed and Interviewed

Note: * p<0.05, ** p<0.01, *** p<0.001

Population Demographics

This section describes the study sample using data from the client interview described earlier that occurred at the time study group members were recruited. According to AHH staff, since the program began in January 2011 and through September 2015 407 clients have been enrolled in the AHH Initiative, whether or not they are still case managed through AHH or another agency is unknown. We also know that not all clients are housed through the AHH Initiative. Twelve of our 95 study group members were not. Based on the time frame of our study and study group eligibility criteria we have estimated, based on AHH housing records, that approximately 320 of 407 AHH clients were eligible for the study.

At the conclusion of our recruitment period, we recruited 95 study group members (30.4% of 320 eligible study group members). We had hoped to recruit more study group members, but due to a variety factors this did not happen. Our recruitment procedure relied on AHH staff and contracted case managers to make the initial contact with AHH clients and inform them of the study either by providing them directly with a flyer advertising the study and/or mailing AHH clients a flyer. After receiving the flyer advertising the study potential study group members could either contact us directly via phone to inquire about the study and schedule an appointment to enroll in the study and complete the baseline interview or their case manager with the client could schedule an appointment. This process did not work as well as we hoped.

Our study recruitment period included clients enrolled in the AHH program between approximately March 2011 and through August 2014. We conducted our first interview in January 2012 and our last interview in August 2015.

Table 7. Final Sample			
Heading Home Initiative Client Count Type	Count	Percent	
Eligible Heading Home Initiative Clients	320	100	
Recruited	95	30.4	

A large minority of the study group members were born in New Mexico (39%). The remainder was born in 21 other states and 7 were born outside the U.S. (Cuba, Japan, England, Mexico, Germany, and France). On average, study group members had lived in New Mexico 20.4 years and a median of 14 years.

Almost 60% of our study group members were male, 33.7% of the study group members were Hispanic, 34.7% were White, 13.7% were American-Indian, and 10.5% were African-American. Ten study group members self-reported they had served in the military. The youngest study group member was 24 years old and the oldest was 74 years old with an average age of 51.2 years old.

Table 8. Demographics				
	Study Group Total			
Variable	Count Percent			
Age				
Average Age	51.2	N/A		
Gender				
Female	39	41.1		
Male	56	58.9		
Ethnicity				
White	33	34.7		
African	10	10.5		
American				
American Indian	13	13.7		
Asian or Pacific	1	1.1		
Islander				
Hispanic	32	33.7		
Other	6	6.3		
Military				
Service				
Yes	10	10.5		
No	85	89.5		

Table 9 reports the education level of study group members. The largest number and percent of study group members were high school graduates or had a GED (37.9%), followed by some college (30.6%), and some high school (16.9%).

Table 9. Education				
	Study Group Total			
Education Level	Count	Percent		
K-8	8	8.5		
Some High School	16	16.9		
GED/High School	37	37.9		
Graduate				
Some College	29	30.6		
College Graduate	4	4.2		
Post Graduate	1	1.1		

Table 10 reports the living arrangements of the study group members prior to becoming clients. Forty-three (45.3%) reported they were homeless and living on the streets before they were housed. Other included garage, furniture store, cave, campsite, and car (3).

Table 10. Prior Living Arrangements			
	Study Group Total		
Prior Living Arrangements	Count	Percent	
Homeless, living on the streets	43	45.3	
House or apartment you rent or own	tment you rent or own 2 2.		
House or apartment of friend or relative	12	12.6	
Shelter, Halfway house, residence, or therapeutic community	17	17.9	
Hotel, motel, or room	14	14.7	
Other	7	7.4	

Table 11 reports information on study member's contacts with different parts of the criminal justice system and public health system. Almost 90% of study group members self-reported ever being arrested and 76.8% reported ever being incarcerated. Almost 95% reported ever being hospitalized and 82.1% reported having chronic medical problems. Slightly, more than 70% reported ever being treated for drug or alcohol abuse and 68.4% reported ever receiving treatment for mental health issues.

Table 11. System Contacts		
Variable	Count	Percent
Ever been arrested	83	87.4
Ever been incarcerated	73	76.8
Ever been hospitalized	90	94.7
Chronic medical problems	78	82.1
Ever been treated for drug or alcohol abuse	67	70.5
Ever received treatment for mental health issues	65	68.4

Table 12 reports the usual employment pattern reported by study group members in the three years prior to being in the program. A small majority (51.6%) reported being unemployed as their usual employment pattern in the three years prior to being in the program and equal percentages (17.2%) reported full time employment and part time employment as their usual employment pattern in the three years prior to being in the program. This information was missing for 2 study group members.

Table12. Usual Employment Pattern						
Employment	Count	Percent				
Full Time	16	17.2				
Part Time	16	17.2				
Retired/Disabled	10	10.8				
Unemployed	48	51.6				
In Controlled Environment	3	3.2				
Missing 2						

Missing 2

Table 13 reports sources of income. Four study group members reported no income. Study group members reported multiple sources of income and the count and percent is derived from 91 study group members who reported any income.

Slightly more than 80% of the study group members reported receiving food stamps, followed by receiving money from family or friends (32.6%), Medicaid/Medicare (29.4%), SSDI/SSI (28.4%), and general assistance from the state (27.3%). Smaller numbers reported earning income through selling blood/plasma (9.4%), child support (3.1%), pension (2.1%), and sex work (2.1%). Almost 14% of the study group members reported other sources of income including day labor, gambling, recycling/scrap metal, and buying and reselling items.

Twenty study group members reported working an average of 25.3 hours a week. Based on our review of the interview data we believe these jobs were primarily jobs in the underground economy where study group members were not formally employed and paying taxes.

Table 13. Sources of Income					
Type of Work	Count	Percent			
Asking for money on the streets	27	28.4			
Child Support	3	3.1			
Family or Friends	31	32.6			
General Assistance from the State	26	27.3			
Job	20	21.1			
Medicaid/ Medicare	28	29.4			
Pension	2	2.1			
Selling blood/plasma	9	9.4			
Sex work	2	2.1			
Social Security	8	8.4			
SSDI/ SSI	27	28.4			
TANF (cash assistance)	6	6.3			
Unemployment	2	2.1			
Veteran's Benefits	1	1.1			
Vocational Rehab	3	3.1			
Other	13	13.7			

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Eighty-five study group members reported an income prior to entering the program and 10 study group members reported no income. Reported incomes ranged from \$5 a month to \$1,426 a month. The average reported income was \$646.85 and the median income was \$421.

Homeless information

Homeless information was also collected via the baseline interview. Study group members were asked how many times they had been homeless and then housed again in the prior three years. On average, study group members reported being homeless and then housed 1.3 times with more than half the study group members reporting one or more times and one study group member reporting being homeless and then housed 6 times in the prior three years. Twenty-three study group members reported being homeless 0 times in the prior three years.

Study group members reported first being homeless, on average, at 35.7 years of age (median 35 years of age) and as young as 6 years of age and as old as 71 years of age.

Total lifetime homeless days were also collected. On average, study group members reported being homeless 6.8 years and a median of 3.3 years, which measures the point at which half the scores are higher and half the scores are lower. The lowest lifetime homeless days reported was 90 days (3 months) and the highest was 31.8 years.

Medical Information

Limited medical information was also collected via the interview. This included self-reported life-time hospitalizations. Eighty-nine study group members reported hospitalizations in their life-times, 5 reported no hospitalizations, and one study group member was missing this information. One study group member who was 62 years old at the time of the interview and reported 1,000 life-time hospitalizations and no chronic medical problems was removed from the analysis. On average, 88 study group members reported 12.2 life-time hospitalizations (median 5, range 1 to 150).

On average study group members reported their last hospitalization was 4.3 years prior to their interview (range 0 to 24 years).

Study group members were asked if they had any chronic medical problems and 18 reported they had no chronic medical problems. At the time of the interview 69 study group members reported they were taking at least one prescription medication for a medical problem on a regular basis.

Contacts with the Police and Arrest Information

Information in this section comes from our interviews with study group members and information provided by the Albuquerque Police Department (APD) that includes APD and Bernalillo County Sheriff Department (BCSD) arrests.

Information from the interviews includes self-reported contacts with the police in the three years before they were housed and self-reported arrests. APD data includes official arrests by APD and BCSD. Together these two agencies account for the large majority of police contacts in Bernalillo County. This section only reports arrest and citation information. By statute (NM Statute 31-1-6) a law enforcement officer who arrests a person without a warrant for a petty misdemeanor or any offense under Chapter 17 NMSA 1978 may offer the person the option of accepting a citation to appear in lieu of jail.

In the three years prior to being housed 60 (63.2%) study group members reported having at least one contact with the police and 35 study group members reported no contacts with the police. Study group members who had contacts reported an average of 8.4 contacts.

Twelve (12.6%) study group members reported no arrests in their lifetime and the remaining 83 study group members reported from 1 arrest to 500 arrests in their lifetime. On average, excluding the one study group member who reported 500 arrests, study group members reported an average of 17.1 arrests in their lifetime. Forty-seven study group members reported no arrests in the three years before being housed. The remaining 48 study group members reported between 1 arrest (20 study group members) and 20 arrests (1 study group member) in the three years before being housed. In the three years prior to being in the AHH program study the 48 study group members reported an average of 1.6 arrests (median 1).

Table 14 reports the arrest and citation information provided by APD information for the 95 study group members up to 4 years' pre-program and 4 years' post-program. This arrest information includes both APD and BCSD data. Arrests for each study time period were less in the post-study time period compared to the pre-study time period. In total, post-study arrests were 31.8% of all arrests during the study.

Table 14. Arrests by Year					
	Pre-Study Arrests Post-Study Arrests				
	Count Percent Count Percer			Percent	
0 – 1 Year	70	75.3	23	24.7	
1 – 2 Years	58	65.2	31	34.8	
2 – 3 Years	27	60	18	40	
3 – 4 Years	11	64.7	6	35.3	
Total	167	68.2	78	31.8	

Table 15 reports arrest and citation information for the 73 study group members who were in the study up to 3 years. As shown in Table 15 post-arrests were fewer in each year of the study and in total for the 73 study group members for the study time period.

Table 15. Arrests for 73 Study Group Members						
	Pre-Study Arrests Post-Study Arrests					
	Count Percent Count Percent					
0 – 1 Year	60	75	20	25		
1 – 2 Years	52	63.4	30	36.6		
2 – 3 Years	20	55.6	16	44.4		
Total	132	66.7	66	33.3		

COST AND SERVICE ANALYSIS

This section reports on the cost analysis. As noted earlier we attempted to collect service and cost information on a wide range of services study group members may have received during the study period. With a few exceptions we were able to collect this information. In time to be included in this study we were able to collect the majority of service and cost information from the majority of agencies we targeted for this study.

Because agencies collect and maintain service and cost information in a variety of formats it was necessary to collect and receive information in a number of different formats and then try to standardize these various services and cost formats for analysis and reporting. In order to compare real dollars across time it was also necessary to use an inflation calculator. The reasons for doing this and the method used were discussed earlier.

Because agencies collect and maintain service and cost information in different formats we were not always able to provide an accurate and reliable count of service visits and/or number of days' services were provided. This impacts our ability to report service visits and service days. While we were able to provide an accurate cost per service we know the costs provided by service agencies were derived using different methods. For example, while some agencies provided us actual costs per service or day other agencies provided us a cost per service or day that was calculated by dividing the number of service days or services into their total budget. Some agencies provided us costs per year and some provided us costs for a single year and the hospitals provided us charges and not costs. Charges are typically what the hospital charges and these are typically inflated and costs are typically how much the payer actually pays for the care of the patient. For this reason, the reported costs have been calculated in a variety of ways. Costs in this section are reported in a variety of ways. Because study group members were recruited over a span of 35 months and had entered the program over a period of time the amount of cost data we have for study group members varies between 1.2 years and 4.7 years. Since we have a range of months we are able to report costs for a differing number of study group members based on their exposure time in days converted to years. This is shown in Table 16.

As noted earlier the 95 study group members were in the study between 1.2 years and 4.7 years. The length of time in the study was defined by the date they were housed and the number of days from their housing date thru September 2015. The last two study group members who had been housed in August 2014 were in the study a little more than 400 days or 1.1 years thru September 2015. The first study group member who was housed in March 2011 was in the study more than 1,650 days or 4.7 years thru September 2015. Table 13 reports the lengths of time study group members were in the study by specific time periods. For purposes of the cost analyses it was necessary to separate study group member into categories to report their time in the study. Because we are comparing costs for study group members from the time period after they were housed to an equal time period prior to the date they were housed it is necessary to compare equal time period pre-program and post-program based on their housing date.

Table 16 shows 95 study group members who were in the study up to 1 year and these same study group members were in the study between 1 year and 2 years (minimum 1.1 years). Seventy-three (73) study group members were in the study between 2 years and 3 years (minimum 2.1 years). This also means 22 study group members (95 - 73) were not in the study 2 years or more. Fifty-one of the 95 study group members were in the study more than 3 years and up to 4 years (minimum 3.1 years) and 8 study group members were in the study more than 4 years (minimum 4 years).

Our analyses include the reporting of services and costs for 1 year, 1 - 2 years, 2 - 3 years and 3 - 4 years for the number of study group members indicated in Table 15.

Table 16. Study Group Time in Study					
Time in	Count	Percent			
Study					
1 Year	95	100.0			
1 – 2 Years	95	100.0			
2 – 3 Years	73	80.0			
3 – 4 Years	51	58.9			
4 - 5 Years	8	15.8			

AHH Housing and Service Costs

Because there were no equivalent housing costs for the pre-period there was a 100% increase in housing costs for each study time period. This is the cost of housing study group members in the Heading Home Initiative program. Housing cost data was provided by the New Mexico Supportive Housing Coalition (SHC). Because not all AHH program clients were housed through the SHC it was necessary to use the SHC provided data to calculate an average cost and use this cost for non-SHC study group members. SHC was helpful in providing the needed information and working through the issue of missing housing cost data.

AHH service cost data was provided by AHH staff. For each year of the project AHH staff provided the budget for staff that provided direct services to clients. These services included outreach and case management, including services provided by the agencies contracted to AHH. Using the provided budget data, we calculated a cost per AHH client and then applied this average cost to our study group members.

Costs and Services One Year

Table 17 reports the services received by all 95 study group members for 1 year before they were in the program and 1 year after entering the program. This information is provided to match the phase one study which reported on 48 study group members for 1 year pre- and post-program admission. The first column reports the type of service, the second column reports the count of pre-study services, and the third column reports the count of post-study services. The fourth column reports the difference between the count of pre-services and the count of post-services. A positive number indicates an increase in services. The percent difference column reports the percent difference from the pre-study time period to the post-study time period. A negative percent indicates a reduction in the count of services from the pre-study to post-study time period and a positive percent indicates an increase in increase in the count of services from the pre-study time period.

As noted in Table 17 the total number of services decreased from the pre-study time period to the post-study time period by 1.5%. The largest increase in the count of services was with social service services (87.7%) and outpatient medical services (12%). The largest percent increase was with housing costs and program service costs of 100% each. This occurred because there were no AHH housing costs or program service costs in the pre-study time period.

Importantly ambulance/emergency rescue services (-55.4%), emergency room visits (-72.3%), hospital inpatient (-59.5%), jail (-57.1%), and shelter (-75%) services decreased. Study group

members used fewer emergency medical services, hospital inpatient services, were arrested and booked into the jail fewer times and because they were housed did not use shelters.

Table 17. Services for Study Group Members One Year						
	Pre-	Post-	Difference	Percent		
	Services	Services		Change		
Ambulance/Emergency Rescue	341	152	-189	-55.4		
Emergency Room	188	52	-136	-72.3		
Hospital Inpatient	49	20	-29	-59.2		
Outpatient Behavioral	410	274	-136	-33.2		
Outpatient Medical	859	962	103	12.0		
Jail	42	18	-24	-57.1		
Shelter	32	8	-24	-75.0		
Social Services	243	456	213	87.7		
AHH Housing	0	95	95	100.0		
AHH Services	0	95	95	100.0		
Total	2,164	2,132	-32	-1.5		

Table 18 reports the cost information associated with the service information reported in Table 16 and the costs follow the trend in reported changes in services. In total, for all study group members the cost of services one-year post-study compared to one-year pre-study decreased 31.3%. This finding is almost identical to the finding in the phase one report of 31.6%. During the study period costs decreased for all but one service. Costs increased for social services (160.1%), which follows with the previous table (Table 17) in which we reported services increased for this service and outpatient medical services. AHH housing and service costs accounted for 30.2% of the total post-program costs.

Table 18. Costs for Study Group Members One Year					
	Pre-Costs	Post-Costs	Difference	Percent Change	
Ambulance/Emergency Rescue	\$180,543	\$81,755	(\$98,788)	-54.7	
Emergency Room	\$318,467	\$116,994	(\$201,473)	-63.3	
Hospital Inpatient	\$1,839,459	\$461,210	(\$1,378,249)	-74.9	
Outpatient Behavioral	\$93,383	\$51,424	(\$41,959)	-44.9	
Outpatient Medical	\$975,918	\$835,604	(\$140,314)	-14.4	
Jail	\$52,402	\$20,680	(\$31,722)	-60.5	
Shelter	\$91,786	\$18,304	(\$73,482)	-80.1	
Social Services	\$54,542	\$141,891	\$87,349	160.1	
AHH Housing Costs	\$0	\$495,384	\$495,384	100.0	
AHH Service Costs	\$0	\$253,713	\$253,713	100.0	
Total	\$3,606,500	\$2,476,959	(\$1,129,541)	-31.3	

Costs and Services One Year to Two Years

The next two tables report costs and services for the 95 study group members who were in the study between 1 year (minimum 1.1 years) and 2 years. Findings are similar to the results of the 1 year pre- and post-study reported earlier. In total services increased almost 1%.

Table 19. Services for Study Group Members One Year to Two Years					
	Pre- Services	Post- Services	Difference	Percent Change	
Ambulance/Emergency Rescue	630	308	-322	-51.1	
Emergency Room	369	87	-282	-76.4	
Hospital Inpatient	77	45	-32	-41.6	
Outpatient Behavioral	585	500	-85	-14.5	
Outpatient Medical	1,487	1,670	183	12.3	
Jail	81	38	-43	-53.1	
Shelter	50	10	-40	-80.0	
Social Services	592	881	289	48.8	
AHH Housing	0	180	180	100.0	
AHH Services	0	180	180	100.0	
Total	3,871	3,899	28	0.7	

Table 20 reports costs for 1 year to 2 years. Post-study costs decreased by 13.6% in this reporting period compared to the 31.6% decrease at one-year post-program admission. During this study period outpatient medical costs increased by 10% compared to the pre-program time period and social services costs increased by 71.7%. AHH housing and service costs accounted for 26.7% of the total post-program costs.

Table 20. Costs for Study Group Members One Year to Two Years					
	Pre-Costs	Post-Costs	Difference	Percent Change	
Ambulance/Emergency Rescue	\$332,698	\$166,341	(\$166,357)	-50.0	
Emergency Room	\$670,147	\$171,974	(\$498,173)	-74.3	
Hospital Inpatient	\$2,563,848	\$1,173,712	(\$1,390,136)	-54.2	
Outpatient Behavioral	\$129,579	\$115,011	(\$14,568)	-11.2	
Outpatient Medical	\$1,348,400	\$1,483,236	\$134,836	10.0	
Jail	\$100,074	\$44,556	(\$55,518)	-55.5	
Shelter	\$145,356	\$25,485	(\$119,871)	-82.5	
Social Services	\$157,548	\$270,506	\$112,958	71.7	
AHH Housing Costs	\$0	\$842,203	\$842,203	100.0	
AHH Service Costs	\$0	\$415,910	\$415,910	100.0	
Total	\$5,447,650	\$4,708,934	(\$738,716)	-13.6	

Costs and Services Two Years to Three Years

Table 21 reports services for the 73 study group members who were in the study a minimum of 2 years and up to 3 years. The number of study group members is different than the 1 year and 1 year to 2 year analyses that included all 95 study group members. This section standardizes the pre-study and post-study time period for the entire sample and so removes study group members who were not in the study for a minimum of 2 years.

Total services for these 73 study group members increased by 7.4% or 311 services during the study period and are similar to the previous analysis of all study group members for 1 to 2 years. Similar to Table 18 ambulance/emergency rescue (-35.3%), emergency room visits (-74.5%), hospital inpatient (-29.5%), jail (-54.2%), outpatient behavioral (-31%) and shelter (-67.4%) services decreased.

Table 21. Services for Study Group Members Two Years to Three Years					
	Pre-	Post-	Difference	Percent	
	Services	Services		Change	
Ambulance/Emergency Rescue	641	415	-226	-35.3	
Emergency Room	440	112	-328	-74.5	
Hospital Inpatient	78	55	-23	-29.5	
Outpatient Behavioral	713	492	-221	-31.0	
Outpatient Medical	1,553	1,943	390	25.1	
Jail	107	49	-58	-54.2	
Shelter	46	15	-31	-67.4	
Social Services	650	1075	425	65.4	
AHH Housing	0	192	192	100.0	
AHH Service	0	192	192	100.0	
Total	4,228	4,539	311	7.4	

Table 22 reports cost information for the 73 study group members for the pre-study period and post-study period. Remember these 73 study group members were in the program a minimum of 2 years and a maximum of 3 years. When strictly controlling for exposure time for the pre-study time period and post-study time period, there was a total cost savings of 15.2%.

Table 22. Costs for Study Group Members Two Years to Three Years					
	Pre-Costs	Post-Costs	Difference	Percent	
				Change	
Ambulance/Emergency Rescue	\$338,386	\$229,924	(\$108,462)	-32.1	
Emergency Room	\$810,436	\$187,951	(\$622,485)	-76.8	
Hospital Inpatient	\$3,938,085	\$1,735,232	(\$2,202,853)	-55.9	
Outpatient Behavioral	\$125,388	\$113,076	(\$12,312)	-9.8	
Outpatient Medical	\$1,245,140	\$1,793,771	\$548,631	44.1	
Jail	\$132,054	\$58,515	(\$73,539)	-55.7	
Shelter	\$105,256	\$38,351	(\$66,905)	-63.6	
Social Services	\$168,784	\$337,218	\$168,434	99.8	
AHH Housing Costs	\$0	\$889,582	\$889,582	100.0	
AHH Service Costs	\$0	\$439,888	\$439,888	100.0	
Total	\$6,863,530	\$5,821,218	(\$1,042,312)	-15.2	

Costs and Services Three Years to Four Years

The next two tables report services and costs for 3 years to 4 years for 51 study group members. During this reporting period services increased by 7.4% with a 24.2% increase in outpatient medical services and a 147.7% increase in social services. AHH housing and services increased by 100% because they did not exist in the pre-study time period. Similar to the other study time periods Ambulance/Emergency Rescue (26.3%), Emergency Room (72.4%), Hospital Inpatient (11.9%), Outpatient Behavioral (21.8%), Jail (54.1%), and Shelter (50%) services decreased.

Table 23. Services for Study Group Members Three Years to Four Years						
	Pre-	Post-	Difference	Percent		
	Services	Services		Change		
Ambulance/Emergency Rescue	575	424	-151	-26.3		
Emergency Room	380	105	-275	-72.4		
Hospital Inpatient	59	52	-7	-11.9		
Outpatient Behavioral	564	441	-123	-21.8		
Outpatient Medical	1,337	1,661	324	24.2		
Jail	85	39	-46	-54.1		
Shelter	34	17	-17	-50.0		
Social Services	413	1,023	610	147.7		
AHH Housing	0	165	165	100.0		
AHH Services	0	165	165	100.0		
Total	3,447	4,539	645	18.7		

Table 24 generally follows the service trends described in Table 23 with one exception. While the number of outpatient behavioral services decreased from the pre-study time period to the post-study time period the cost of those services increased by 9%. This occurred because the average cost of each behavioral health service was greater in the post-study time period.

Table 24. Costs for Study Group Members Three Years to Four Years						
	Pre-Costs	Post-Costs	Difference	Percent		
				Change		
Ambulance/Emergency Rescue	\$304,266	\$237,625	(\$66,641)	-21.9		
Emergency Room	\$715,161	\$178,512	(\$536,649)	-75.0		
Hospital Inpatient	\$3,540,538	\$1,692,095	(\$1,848,443)	-52.2		
Outpatient Behavioral	\$103,424	\$112,753	\$9,329	9.0		
Outpatient Medical	\$852,281	\$1,634,490	\$782,209	91.8		
Jail	\$113,117	\$50,673	(\$62,444)	-55.2		
Shelter	\$83,643	\$47,141	(\$36,502)	-43.6		
Social Services	\$80,719	\$305,347	\$224,628	278.3		
AHH Housing Costs	\$0	\$730,546	\$730,546	100.0		
AHH Service Costs	\$0	\$391,006	\$391,006	100.0		
Total	\$5,793,149	\$5,380,188	(\$412,961)	-7.1		

Costs and Services Two Years to Three Years Reported by Year

The next set of figures reports the information presented in Table 21 and Table 22 above by year. This analysis is useful to track changes in costs and services over the 6 years (three years' pre-program and three years' post-program) for 73 study group members. This type of analysis provides a comparison by each year of the pre-study and post-study housing period. Figure 3 reports the total costs and total services for study group members for the six study years (three years' pre-program and three years' post-program). Total services are indicated by the solid red line and the count of services is shown on the left axis. Total costs are indicated by the blue bar and the cost is shown on the right axis. The red dotted line separates the costs and services by the pre-study time period and post-study time period.

As indicated in Figure 1 total costs and total services varied from the pre-study time period to the post-study time period. Services and costs were particularly high for the year prior to entering the AHH program and becoming housed and dropped considerably in the first year post program with slight increases in costs in the second year and third year post-program. Total services continued to decrease in the second and third year post-program. Costs remained relatively flat in year two and year three post-program, but still a decrease compared to the year cost in the year immediately before study group members entered the program. Total costs and services were highest in pre-program study year one.

If these individuals had not become part of the AHH Initiative costs and services may have continued to increase. As indicated in Figure 1 both costs and services were on an upward trajectory and costs and services generally decreased by a large amount in the post-study year one. As shown in later figures costs and services also decreased by large amounts in most categories. Because we lack any type of comparison group we have no way to test or verify this idea.

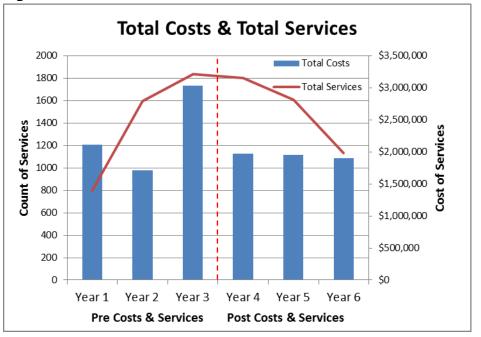




Figure 2 reports Albuquerque Heading Home Housing and Service Costs. Based on information provided by AHH program staff, both housing costs and service costs decreased during the three-year study period. We believe this is a result of a number of factors. First, based on available data and discussions with AHH staff some AHH clients, who include some of our study group members, received services from agencies and staff who were not funded directly by AHH program funds. Second, because the AHH program did not keep clear records on the status of clients it is not clear which clients and study group members were active and which had been discharged, their discharge reason, and the date of their discharge.

This finding presents challenges. Costs and services cannot be explained using program status (active vs. discharge) as an explanatory variable. We would expect costs and services might increase for study group members who were no longer active in the program but because we lack discharge information we are unable to make this connection. Related to this issue, we are unable to ascertain which of our study group members, who may have been discharged from **33** | P a g e

the program, no longer live in Albuquerque and so no longer would have services in Albuquerque. Anecdotally, we know at least one study group member who was no longer active in the program had been sentenced to prison for some part of the post-program study and another study group member had left Albuquerque for some portion of the post-program study time period. This same issue exists for the pre-study time period. We don't know with certainty which study group members were residing in Albuquerque the full pre-study time period.

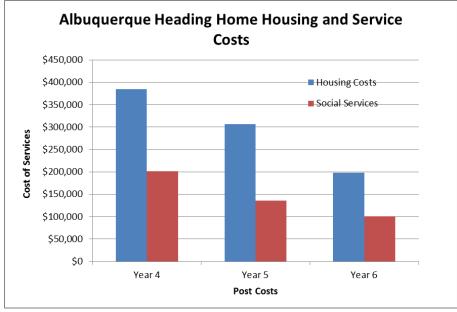


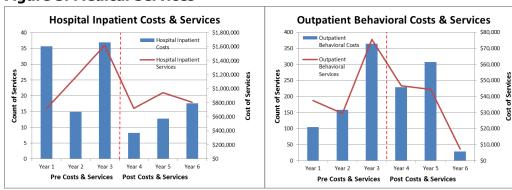
Figure 2.

The next five figures report medical costs including hospital inpatient, medical outpatient, outpatient behavioral health, emergency room, and ambulance and emergency rescue services.

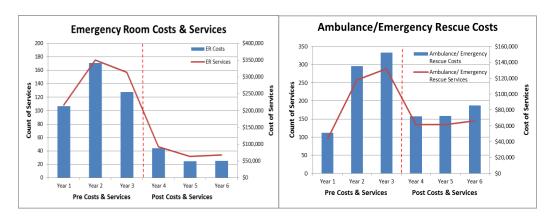
Figure 3 reports medical costs over the six-year study period. During the study period there was a decline in costs and services in hospital inpatient, outpatient behavioral, outpatient medical, emergency room, and ambulance and emergency rescue, particularly since individuals entered the AHH program and became housed as indicated by the vertical dotted red line. Study group members received more services and had more costs in the year before they entered the program and became housed than in the previous two years for all types of medical services except emergency room services. We do not know why this occurs. This does suggest that at the time study group members entered the program they were high users of medical services. This would also seem to confirm our earlier finding that the AHH program serves clients with high needs. With this in mind these findings suggest the program was able to serve clients who used emergency medical services and to reduce the use of emergency medical type **34** | P a g e

services. Because we lack a comparison group we don't know how this finding compares to similar individuals who did not become AHH clients.

The increase in outpatient medical services was not unexpected. A possible and plausible explanation is that as study group members became housed and stable they were better able to access outpatient medical care and receive routine medical care which reduced their need to access emergency medical services and hospital inpatient services when their illness became acute. We believe a similar explanation accounts for the use of social services which is described below. We do not know what caused the large drop in outpatient behavioral costs and services in year 6 which is year 3 of the post-program.







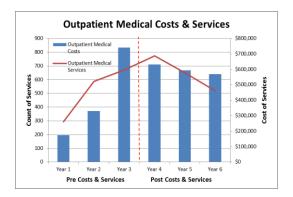
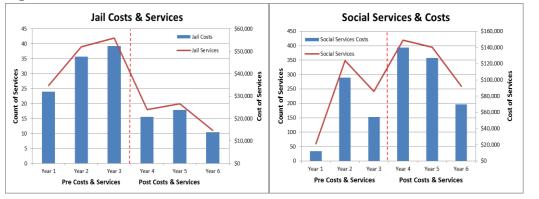


Figure 4 reports jail costs and services and social service services and costs.

Jail bookings and costs increased during the pre-study time period and sharply decreased in the three-year time period following when study group members entered the AHH program and became housed.

Social services included a range of services that provided weekly group or individual services that offered coffee, food, referrals, or other types of psychosocial support to community members. AHH clients could also receive short-term assessments and long-term case management for homelessness, if they were struggling with severe mental health illnesses, substance abuse, or other disabilities. AHCH offered a program named ArtStreet, which incorporates an open studio space for community members to gather and create art. The program is used as a "connection for community building for those without and with homes".

The use of social services increased from the pre-program study time period to the postprogram study time period. Social service services and costs peaked in the first year of the post-program study period, decreased slightly in post-program year two and further decreased in the post-program year three.





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Table 25 reports the average 2 - 3 year pre-program and post-program cost per study group member, the difference between the average costs and the average percent cost savings. On average the cost savings per study group member was \$14,728 for the 73 study group members who were in the study 2 - 3 years and the average percent savings was 16.4%.

Table 25. Heading Home Initiative Program Costs per StudMember Two Years to Three Years	ly Group
	Cost
Average 2-3 Year Pre-Heading Home Initiative	\$94,021
Average 2-3 Year Post-Heading Home Initiative	\$79,743
Difference Between Pre and Post Costs Including Albuquerque	\$14,728
Heading Home Initiative	
Percent Difference Between Pre and Post Costs Including	-16.4%
Heading Home Initiative	

Study Time Frames Combined

This section combines the study reporting time periods discussed above to a single section by reporting the percent change in services (Table 26) and costs (Table 27).

Table 26 reports the change in services across the 4 study time frames. Across the study time periods total services increased slightly. At the 3 - 4 year time frame total services increased by 18.7%.

From the first study time period to the last study time period the change in services varied. Ambulance/emergency rescue services showed a decrease of 55.4% in the 1-year time period and the cost savings reduced each time frame and was lowest in the 3 - 4 year time frame at 26.3%. Hospital inpatient services decreased during each study time period from a high of 59.2% in the first time period to a low of 11.9% in the 3 - 4 year time frame.

The decrease in emergency room services remained at between 72.3% and 76.4% across the study time periods. Jail bookings also maintained a decrease of between 53.1% and 57.1% across the study time frames. Shelter services also maintained a large decrease across the time frames ranging from 80% to 50%. The decrease in outpatient behavioral services varied between 14.5% and 33.2%. Outpatient medical services experienced increases in almost each study time frame and did social service costs experienced an increase in each time frame.

Table 26. Services Across Study Time Periods				
Number of Study Group Members	95	95	73	51
Study Time Period	1 Year	1-2 Years	2-3 Years	3-4 Years
Ambulance/Emergency Rescue	-55.4	-51.1	-35.3	-26.3
Emergency Room	-72.3	-76.4	-74.5	-72.4
Hospital Inpatient	-59.2	-41.6	-29.5	-11.9
Outpatient Behavioral	-33.2	-14.5	-31.0	-21.8
Outpatient Medical	12.0	12.3	25.1	24.2
Jail	-57.1	-53.1	-54.2	-54.1
Shelter	-75.0	-80.0	-67.4	-50.0
Social Services	87.7	48.8	65.4	147.7
Housing Costs	100.0	100.0	100.0	100.0
Service Costs	100.0	100.0	100.0	100.0
Total	-1.5	0.7	7.4	18.7

Table 27 reports changes in costs for the study time period from the 1-year study time frame to the 3 - 4 year study time frame. As noted in previous sections the change in costs roughly parallels the change in services. In total cost savings were highest in the one-year time period following admission into the program compared to the one-year time period before admission. This finding is almost identical to the phase one study cost savings finding of 31.6%. When the cost study is extended to subsequent years this cost savings is reduced. In the 1 - 2 year study time frame the total cost savings was 13.6%, in the 2 - 3 year study time frame the cost savings was 7.1%.

The percent change in costs varied by type of service. The change in ambulance/emergency rescue cost savings was greatest at the 1-year study time frame (54.7%) and reduced during each study time period. There was a 21.9% cost savings at the 3 - 4 year study time frame. Similarly, outpatient behavioral services cost savings decreased each time period until at the 3 - 4-year study time frame the was an increase of 9% in costs. Emergency room cost savings remained between 63.3% and 76.8% for the entire study time frame. Similarly, hospital inpatient, jail, and shelter cost savings remained consistently high during each study time period.

Outpatient medical costs showed a decrease in the 1-year time frame and increased during each study time frame. At the 3 - 4 year time frame outpatient medical costs had increased

Table 27. Costs Across Study Time Periods				
Number of Study Group Members	95	95	73	51
Study Time Period	1 Year	1-2 Years	2-3 Years	3-4 Years
Ambulance/Emergency Rescue	-54.7	-50.0	-32.1	-21.9
Emergency Room	-63.3	-74.3	-76.8	-75.0
Hospital Inpatient	-74.9	-54.2	-55.9	-52.2
Outpatient Behavioral	-44.9	-11.2	-9.8	9.0
Outpatient Medical	-14.4	10.0	44.1	91.8
Jail	-60.5	-55.5	-55.7	-55.2
Shelter	-80.1	-82.5	-63.6	-43.6
Social Services	160.1	71.7	99.8	278.3
Housing Costs	100.0	100.0	100.0	100.0
Service Costs	100.0	100.0	100.0	100.0
Total	-31.3	-13.6	-15.2	-7.1

91.8%. Social service costs increased in the 1-year time frame by 160.1% and decreased in the next two time frames and increased in the 3 - 4 year time frame to 278.3%.

COST BENEFIT ANALYSIS

This next section provides a cost benefit analysis. The cost benefit is determined by calculating the investment in the program defined as the costs for developing and implementing the program and the operational costs of the program.

The point of view of this cost benefit calculation is from the perspective of the City of Albuquerque and the Albuquerque Heading Home Initiative. The benefits are compared with the program costs to determine the effectiveness of the program. It is important to note this calculation does not take into account many of the social benefits of the program, including how the lives of clients served by the program have improved. The time horizon for this analysis is similar to the cost benefit analysis and for this analysis we report the ROI for study group members who were in the study between 2 years and 3 years.

The cost benefit analysis is calculated for study group member who were in the study between 2 years and 3 years and uses the findings presented in Table 22 and the formula presented below:

Return on Investment (ROI) = (post-study costs – pre-study costs) – (program costs) / program costs.

The program benefits were calculated by subtracting the pre-costs of the program from the post-costs of the program less the AHH housing and services costs (\$2,371,782). The program costs were calculated by the adding the housing cost (\$889,582) and the service costs (\$439,888) and then subtracting this amount (\$1,329,470) from the program benefits. This amount was then divided by the program costs.

Using this formula, we found a cost benefit of \$1.78. This can be interpreted as for every \$1.00 spent the program created a \$1.78 of benefits. Thus, there was a 78% return on investment.

APPLYING THE FINDINGS

In our comparison of AHH Initiative clients to the population of homeless individuals assessed using the VI and VI-SPDAT. As described earlier the VI is used in homeless enumeration counts in numerous locations in the United States and it is designed to identify and prioritize the homeless population for housing based on their health. This survey provides information on vulnerability, length of time lived on the street, homelessness in the past three years, health status, substance abuse history mental health, insurance, veteran status, gender, race/ethnicity, citizenship, and highest grade completed. Importantly the VI can be used to provide a measure of vulnerability of the Heading Home Initiative target population, the population housed under the initiative, and our study group. Using these data, we compared our study group to the total population of homeless individuals who were assessed with the VI. As noted in Table 5 there were no significant differences between the total population of homeless individuals and those accepted into the AHH Initiative, except for age at start of homelessness and overall age. This finding is important because it shows the clients accepted into the AHH Initiative are similar to the total population of homeless individuals assessed using the VI and in some ways are more vulnerable. The comparison of our study group members to AHH Initiative clients found our study group members were representative of the total population of housed individuals. For this reason, we believe it is reasonable to consider applying the average cost savings generated for this study to each study group member. This is an important finding.

Table 25 provides the average cost savings per study group member who were in the study 2 years to 3 years. Applying the average difference to the 320 eligible study group members generates a 2 year to 3 years cost savings of \$4,712,960.

Table 28. Heading Home Initiative Program Study Group Member Two Years to Three Years Cost Savings Applied		
	Cost	
Difference Between Pre and Post Costs Including Albuquerque	\$14,728	
Heading Home Initiative		
Eligible Study Group Members	320	
Total Estimated Savings	\$4,712,960	

FOLLOW UP INTERVIEWS

The follow up interview includes quality of life questions, satisfaction with services, and indicators of social stability. The follow-up interview was designed to occur approximately 12 months after the intake interview and take approximately 15 minutes. This part of the study was intended to enhance the cost study by providing information on how study group members perceived changes to their quality life, their satisfaction with services, and stability in their lives.

Study group members were first asked the extent to which their quality of life had improved since entering the program and overall how satisfied they were with their housing situation since entering the program. Both questions were asked using a four-point scale. Table 29 reports the findings. Twenty-three of 25 study group members reported the overall quality of their lives had improved a lot and two reported somewhat. Twenty-four study group members reported they were "A lot" satisfied with their housing situation and one study group member reported somewhat.

Table 29. Quality of Life					
	Average	A lot (1)	Somewhat (2)	A little (3)	Not at all (4)
Overall, to what extent has your quality of life improved since entering this program?	1.1	23	2	0	0
Overall, how satisfied are you with your housing situation since entering this program?	1.0	24	1	0	0

Study group members were asked how helpful the Albuquerque Heading Home program was in meeting the housing and other needs of the study group members on a four-point scale from very helpful (1), helpful (2), somewhat helpful (3), and not helpful (4). Overall study group members reported the program was very helpful (1.2).

Study group members were asked to respond to a series of statements about their life since becoming housed on a scale of 1 to 5 from "strongly agree" (5) to "strongly disagree" (1). Table 30 reports the responses. For 15 of the 20 statements respondents on average reported they were between agree and strongly agree, meaning since becoming housed their lives had improved. On average, respondents only somewhat agreed they were not using alcohol at all, they agreed they were not using alcohol as much. Study group members reported they somewhat agreed they were socializing more and were close to "Agree" that they had increased contact with family members and felt more a part of their community.

Table 30. Life Since Becoming Housed	
Since becoming housed	Mean
I deal more effectively with daily problems.	4.3
I am better able to control my life.	4.4
I am not using drugs as much.	4.5
I am not using drugs at all.	4.6
I am not using alcohol as much.	4.0
I am not using alcohol at all.	3.4
My physical health is improved.	4.0
My mental health is improved.	4.1
My personal and family relationships have improved.	3.8
I feel more a part of my community.	3.9
I have increased contact with family members.	3.8
I feel better about myself.	4.6
I have a greater sense of freedom.	4.5
My overall quality of life has improved.	4.8
I have a greater sense of independence.	4.6
I feel that I am socializing more.	3.7
I feel that my learning ability has improved.	4.0
I notice myself helping others more.	4.2
My eating habits have improved.	4.2
I am eating healthier food.	4.2

Study group members were asked about their alcohol and drug use in the 30 days prior to the follow up interview. Twelve study group members (48%) reported any alcohol used in the last 30 days an average of 7.3 days, 28% reported alcohol to intoxication an average of 9.4 days, and 1 study group member reported using illegal drugs every day during the past 30 days.

Table 31. Alcohol and Drug Use			
During the past 30 days, how many days have you	Count	Percent	Days
use the following:			
Any alcohol	12	48	7.3
Alcohol to intoxication (5+ drinks in one setting)	7	28	9.4
Alcohol to intoxication (4 or fewer drinks in one	5	20	3.4
sitting and felt high)			
Illegal drugs	1	4	30
Both alcohol and illegal drugs on the same day	0	N/A	0

Study group member were also asked about their mental health in the past 30 days. Eleven (44%) study group members reported experiencing serious depression an average of 10.2 days in the past 30 days and 48% reported experiencing serious anxiety or tension. Slightly more than 50% of the 25 study group members reported they experienced trouble understanding, concentrating, or remembering and/or had been prescribed medication for a psychological/emotional problem in the past 30 days.

Table 32. Mental Health			
In the past 30 days, how many days, not due to	Count	Percent	Days
your use of alcohol or drugs, how many days have			
you:			
Experienced serious depression	11	44	10.2
Experienced serious anxiety or tension	12	48	14
Experienced hallucinations	2	8	4
Experienced trouble understanding, concentrating,	13	52	24.7
or remembering			
Experienced trouble controlling violent behavior	2	8	3.5
Attempted suicide	0	N/A	0
Been prescribed medication for	13	52	26.5
psychological/emotional problem			

Table 33 is a follow up to Table 32 and asked how bothered study group members were by the psychological/emotional problems reported in Table 32 on a scale from "not at all" (1) to "extremely" (5). On average, study group members reported they were close to moderately bothered (2.8).

Table 33. Bothered by Psychological/Emotional Problems			
Problems	Count	Percent	
Not at all	4	18.2	
Slightly	7	31.8	
Moderately	4	18.2	
Considerably	4	18.2	
Extremely	3	13.6	

Missing 3

Table 34 reports inpatient treatment, outpatient treatment, and emergency room treatment for physical complaints, mental or emotional difficulties, and alcohol or substance abuse in the 30 days prior to the interview. Only two study group members reported inpatient treatment for an average of 2 nights. More study group members reported outpatient treatment for a physical complaint (36%), mental or emotional difficulties (40%), and 1 study group member reported outpatient treatment for alcohol or substance use. Four study group members reported emergency room treatment for a physical complaint and 1 study group member for alcohol or substance abuse.

Table 34. Treatment				
Treatment Type	Yes	Percent	If yes, how many nights or visits in the past 30 days	
Inpatient Treatment for:				
Physical complaint	2	8	4	
Mental or emotional difficulties	0	N/A	0	
Alcohol or substance abuse	0	N/A	0	
Outpatient Treatment for:				
Physical complaint	9	36	1.8	
Mental or emotional difficulties	10	40	2.1	
Alcohol or substance abuse	1	4	4	
Emergency Room Treatment for:				
Physical complaint	4	16	N/A	
Mental or emotional difficulties	0	N/A	N/A	
Alcohol or substance abuse	1	4	N/A	

The 25 follow up study group members were asked if they had visited any meal sites in the 30 days prior to the interview. Seventeen reported no meal site visits and 7 reported visiting a

meal site 27 times during the past 30 days for an average of 3.9 meals each. One study group member was missing this information.

Table 35 reports study group member's overall health on a five-point scale from excellent (1) to poor (5). On average, study group members reported their health as good (2.9).

Table 35. Overall Health				
Health	Count	Percent		
Excellent	3	13.6		
Very Good	4	18.2		
Good	9	40.9		
Fair	5	22.7		
Poor	1	4.5		

Missing 3

Our review of the follow up interviews found 23 of 25 study group members reported the overall quality of their lives had improved a lot and two reported somewhat. Twenty-four study group members reported they were "A lot" satisfied with their housing situation and one study group member reported somewhat. The majority of respondents (75%) also noted that on average since becoming housed their lives had improved. On average, respondents somewhat agreed they were not using alcohol at all or that they were not using alcohol as much. Study group members also somewhat agreed they were socializing more and almost agreed they had increased contact with family members and felt more a part of their community. Slightly more than 50% of the 25 study group members reported they experienced trouble understanding, concentrating, or remembering and/or had been prescribed medication for a psychological/emotional problem during the past 30 days.

DISCUSSION AND CONCLUSION

The primary purpose of this study was to report on the cost effectiveness of the Albuquerque Heading Home Initiative. This report is a follow up to the phase one study completed in October 2013, which found a one-year cost saving of approximately 31.6% or \$12,832 per study group member. In the phase one study we found utilization of emergency room services, medical outpatient, hospital inpatient, emergency shelters, and jails were reduced by participation in the program. Mental health outpatient, jail based treatment, and social service costs increased from the one-year pre-time period to the one-year post-time period.

This phase of the study included an expanded study group (48 study group members in phase one to 95 study group members in this phase), an expanded study time frame from one year to as many as four years, the addition of ambulance/emergency rescue services, the addition of

official arrest histories, and the addition of follow up interviews for a number of study group members.

The cost study relied on the collection of service and cost data maintained by various Albuquerque agencies. This included emergency room, inpatient medical, outpatient medical, outpatient behavioral health, ambulance and emergency rescue services, jail bookings, and shelter utilization. We also collected local arrest histories to document the number of arrests pre- and post-housing. At the completion of recruitment for the study, we were able to recruit 95 or 29.7% of 320 eligible Heading Home Initiative program clients. We also completed follow up interviews with 27 of 69 eligible study group members.

In addition, we collected and analyzed information that compared our study group members on vulnerability measures and demographics to report how similar our study group members were to all AHH program clients. We also used these same data to describe our study group members. This information included income status and employment, quality of life, length of time lived in Albuquerque, date of birth, race/ethnicity, lifetime homelessness, and shelter utilization.

Our follow up interview was designed to collect information on how study group members perceived changes to their quality life, their satisfaction with services, and stability in their lives. This is an important enhancement to the cost study and was not part of the phase one study.

Our review of the differences between all AHH program clients and our study group members, on both vulnerability measures and demographic variables, found that our study group members were representative of the total population of AHH program clients. With this finding we believe our findings, considering changes in services and costs among study group members for the pre-study time period and the post-study time period, can be generalized to the larger population of AHH program clients. This is an important finding.

Our analysis of the follow up interviews found the large majority of study group members who participated in this part of the survey reported the overall quality of their lives had improved a lot and they were "A lot" satisfied with their housing. The majority of respondents (75%) also noted that on average since becoming housed their lives had improved. On average, respondents somewhat agreed they were not using alcohol at all or that they were not using alcohol as much and also somewhat agreed they were socializing more and almost agreed they had increased contact with family members and felt more a part of their community. Slightly more than 50% of the 25 study group members reported they experienced trouble understanding, concentrating, or remembering and/or had been prescribed medication for a psychological/emotional problem during the past 30 days. This finding suggests the program might consider focusing services in this area.

Costs in this study were reported in a variety of ways. As noted elsewhere study group members were recruited over a span of 35 months and so the amount of cost data we have for study group members varies between 1.2 years and 4.7 years. Since we have a range of months we reported costs for a differing number of study group members based on their exposure time in days converted to years. The length of time in the study was defined by the date they were housed and the number of days from their housing date thru September 2015.

Ninety-five study group members were in the study up to 1 year and all of these same study group members were in the study between 1 year and 2 years (minimum 1.1 years). Seventy-three (73) study group members were in the study between 2 years and 3 years (minimum 2.1 years). This also means 22 study group members (95 - 73) were not in the study 2 years or more. Fifty-one of the 95 study group members were in the study more than 3 years and up to 4 years (minimum 3.05 years) and 8 study group members were in the study more than 4 years (minimum 4.01 years).

Our analyses include the reporting of services and costs for 1 year, 1 - 2 years, 2 - 3 years and 3 - 4 years. In total cost savings were highest in the one-year time period following admission into the program compared to the one-year time period before admission. This finding is almost identical to the phase one study cost savings finding of 31.6%. When the cost study is extended to subsequent years this cost savings is reduced. In the 1 - 2 year study time frame the total cost savings was 13.6%, in the 2 - 3 year study time frame the cost savings was 15.2%, and in the 3 - 4 year study time frame the cost savings was 7.1%.

The percent change in costs varied by type of service. The change in ambulance/emergency rescue cost savings was greatest at the 1-year study time frame (54.7%) and reduced during each study time period. There was a 21.9% cost savings at the 3 – 4 year study time frame. Similarly, outpatient behavioral services cost savings decreased each time period until at the 3 - 4-year study time frame the was an increase of 9% in costs. Emergency room cost savings remained between 63.3% and 76.8% for the entire study time frame. Similarly, hospital inpatient, jail, and shelter cost savings remained consistently high during each study time period.

Outpatient medical costs showed a decrease in the 1-year time frame and increased during each study time frame. At the 3 - 4 year time frame outpatient medical costs had increased 91.8%. Social service costs increased in the 1-year time frame by 160.1% and decreased in the next two time frames and increased in the 3 - 4 year time frame to 278.3%.

We conducted additional analyses of the 73 study group members who were in the study 2 - 3 year pre-program and post-program cost per study group member, the difference between the

average costs and the average percent cost savings. On average the cost savings per study group member was \$14,728 for the 73 study group members who were in the study 2 -3 years and the average percent savings was 16.4%.

The costs benefit analysis for study group members who were in the study between 2 years and 3 years found a benefit of \$1.78. This can be interpreted as for every \$1.00 spent the program realized a \$1.78 in benefits.

Because we also found our study group members were similar to all AHH clients we were able to apply the average cost savings per study group member to all AHH clients. Using the average cost saving for study group members in the study 2 years to 3 years and applying this average difference to the 320 eligible study group members generated a 2 year to 3 years cost savings of \$4,712,960.

Similar to other studies nationally and the local 2011 Housing First Cost Study and the Phase 1 Albuquerque Heading Home cost study (2013) this study found a net cost benefit. This finding confirms the cost saving benefit of this program for time periods up to four years. The estimated benefit is fairly large in the first year post-program and becomes more moderate in the ensuing years post-program admission.

About The Institute for Social Research

The Institute for Social Research is a research unit at the University of New Mexico. The Institute includes several centers including the Center for Applied Research and Analysis, the Statistical Analysis Center, and the New Mexico Sentencing Commission. The Institute for Social Research conducts high quality research on a variety of local, state, national, and international subjects. The critical issues with which the Institute works includes traffic safety, DWI, crime, substance abuse treatment, education, homeland security, terrorism, and health care.

This and other ISR reports can be found and downloaded from the Institute for Social Research, Center for Applied Research and Analysis web site: (http://isr.unm.edu/centers/cara/reports/)

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APPENDICES

- **Appendix A: Heading Home Initiative Cost Study Interview**
- **Appendix B: Heading Home Initiative Recruitment Letter and Flyer**
- **Appendix C: Heading Home Initiative Consent for Interview**
- **Appendix D: Heading Home Initiative Consent for Record Review**
- **Appendix E: Heading Home Follow up Interview**

Appendix A: Heading Home Initiative Cost Study Interview

nt Interview
viewee doesn't know Ipplicable
sed
of Albuquerque Heading Home provide us with information that will , even information about drug use and uestions concerning your housing and e program, medical status, nistory, and psychiatric status.
UP SECTION. SKIP TO ITEM J1
(Middle)
(Middle)
(Middle)
Mos.)

6) Social Security Number
A. MILITARY SERVICE
A1) Did you ever serve in the U.S. Armed Forces? 0 - No 1 - Yes
 A2) If yes, in what branch(es) of the Armed Forces did you serve?
A3) If yes, when did you first enter the Armed Forces? (mm)(yyyy)
A4) When were you last discharged? (mm) (yyyy)
A5) Altogether, how much time did you serve in the Armed Forces? (yyy) (mm)
A6) What type of discharge did you receive?1 - Honorable2 - General (honorable conditions)3 - General (without honorable conditions)4 - Other than honorable5 - Bad conduct6 - Dishonorable7 - Don't know8 - Other - specify:
B. MEDICAL STATUS
B1) How many times in your life have you been hospitalized for medical problems?(<i>Exclude detoxification</i>)
B2) How long ago was your last hospitalization for a medical problem?
 B3) Do you have any chronic medical problems that continue to interfere with your life?
 B4) Are you taking any prescribed medication on a regular basis for a medical problem? 0 - No 1 - Yes (specify)
B5) Do you receive a pension for a physical disability? (Exclude psychiatric disability) 0 - No 1 - Yes
2

C. EMPLOYMENT/SUPPORT STATUS

C1) Education completed? ____(yrs.) (GED = 12, Bachelor's degree = 16, Master's = 18, Ph.D. = 20)

C2) Vocational or technical education completed? (yrs.) (If no vocational or technical education completed enter '0')

C3) Do you have a profession, trade or skill?____

0 - No 1 – Yes (specify) _

/y) (mm)

C5) What was your usual employment pattern the three years prior to being in this program?

- 1 Full-time (40 hrs./week)
- 2 Part-time
- 3 Student
- 4 Service
- 5 Retired/disabled
- 6 Unemployed
- 7 In controlled environment

C6) What is your current employment status?

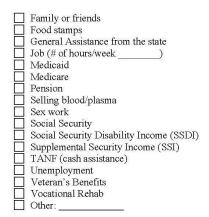
- 1 Full-time (40 hrs./week)
- 2 Part-time
- 3 Student
- 4 Service
- 5 Retired/disabled
- 6 Unemployed
- 7 In controlled environment

C7) What was your average monthly income prior to entering this program?

(Include as income money from food stamps, SSI, SSDI, money from friends/family, under the table, illegal income, etc.)

C8) What sources of income did you have prior to entering this program? (mark all that apply)

Asking for money on streets Child support



C9) What is your current average monthly income?

D. LEGAL STATUS

D1) How many months have you been incarcerated in your life? (mos.) (*This includes jail and prison. Round to the nearest month and if given years convert to months.*)

D2) In the past 3 years did you have any contacts with the police?

(A contact does not have to be an arrest. Contacts include being stopped and other types of contacts.) 0 - No

1 - Yes

D2a) If yes, how many? ____

D3) How many times have you been arrested in your life?

D4) How many times were you arrested in the three years prior to being in this program?

E. DRUG/ALCOHOL USE

E1) How many times in your life have you been treated for alcohol abuse?

E2) How many times in your life have you been treated for drug abuse?

E3) How many of these were for detoxification only? Alcohol_____ Drugs

E4) In the 3 years, prior to entering this program do you feel you had a problem with alcohol or drug dependency?

0 - No 1 – Yes

- 105

F. FAMILY/SOCIAL RELATIONSHIPS

F1) Marital status

- 1 Married
 - 2 Remarried
 - 3 Widowed
 - 4 Separated 5 - Divorced
 - 6 Never married

F2) How long have you been in this marital status?

(yyy) (mm)

F3) Are you satisfied with this situation?_

0 - No

1 - Yes

2 - Indifferent

F4) How many places did you live in the year prior to entering this program?_

F5) Where were you living prior to this program?_

- 1 Homeless
 - 2 House or apartment you rent or own
 - 3 House or apartment of friend or relative
 - 4 Halfway house, residence, or therapeutic community
 - 5 Hotel, motel, or room
 - 6 Institution (jail, hospital)
 - 7 Other (specify)

- F6) Usual living arrangements (three years prior to this program)_
 - 1 With sexual partner and children
 - 2 With sexual partner alone
 - 3 With children alone
 - 4 With parents 5 - With family
 - 6 With friends
 - 7 Alone

 - 8 In controlled environment
 - 9 No stable arrangements

F7) At what age did you first became homeless? _

F8) How many months have you been homeless in your life?

G. PSYCHIATRIC STATUS

G1) How many times in your life have you been treated in a hospital for any psychological or emotional problems?

G2) How many times in your life have you been treated in an outpatient or private patient setting for any psychological or emotional problems?_

G3) Have you ever received a pension for a psychiatric disability?

0 - No 1 - Yes

H. CURRENT MEAL SITES VISTED

H1) SINCE BEING HOUSED IN THE PROGRAM, HAVE YOU VISITED ANY MEAL SITES? 0 – NO 1 – YES

H2) HOW MANY MEALS PER MONTH DO YOU EAT AT MEAL SITES SINCE BEING HOUSED?

H3) WHICH MEAL SITES DO YOU VISIT? AND HOW MANY MEALS DO YOU EAT AT

GOOD SHEPARD	MPD
NOON DAY	MPD
RESCUE MISSION	MPD
JOY JUNCTION	MPD
OTHER	MPD
•	
•	

I. RETROSPECTIVE DATA COLLECTION

(Work backwards from the month before client was housed to 24 months back. Interviewer should use the different types of cues listed below before the questions to help client recall. Interviewer should generate personalized cues as the need arises. Interviewer should be flexible. Enter events when raised, move forwards and backwards in time, and feel free to move among the different topics listed below as questions. This needs to be done with subtlety and care to ensure the respondent does not feel they are being tested or undermined.)

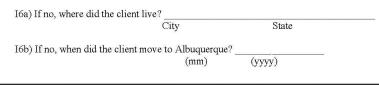
(11, 12, 13, 14, 15, and 16 should be completed before beginning the interview and this section.)

II) Date client was housed:	(mm) (dd)	(уууу)		
I2) 24 Month Date:(mm) (The 24 month date is 24 month	(dd) (yyyy)		housed)	
[The 24 month dute is 24 month	shis ago from the l	uute me cheni was r	iousea.)	
I3) Date client was interviewed	d using the Vulne		nm) (dd)	(уууу)
I4) Date of birth: (mm)((dd) (yyyy)			
I5) Client's age:				

I6) Did the client live in Albuquerque the entire 24 month period prior to entering the program: (This information should be available from the VI survey. This information can also be calculated from Q.3. of this interview.)

0 - No 1 - Yes

(IF YES SKIP TO I.7.)



Additional Cues: The following cues should be used to help client recall. External events - Christmas, Thanksgiving, Halloween, 4th of July, Easter, New Years, seasons of the year (winter, summer, spring, and fall) Personal events - Other cues like where does client stay in winter; does client sometimes stay with family (i.e. parents, siblings, other relatives, children, etc.), friends and others; does the client use shelters (i.e. Good Shepherd, Alb. Rescue Mission, Joy Junction, Alb. Opportunity Center); etc. Recall about past events like iobs may help clients recall where they were living or vice-versa.

17) Can you tell me where you lived the two years prior to being housed by the AHH project? (Goal is to record the number of days client was homeless [living on the street], the number of days spent in shelters, number of days living with family or friends, etc. in the 24 months prior to being housed.)

18) Can you tell me whether and when, in the last two years, prior to being housed by the AHH project, you used emergency room services at any Albuquerque hospital or other hospital? (If client reports not using emergency room services in the 24 months before being housed mark 'No'. If the client reports 'Yes' the goal is to record the number of times the client has used emergency room services in the 24 months prior to being housed.)

0 - No

1 - Yes

19) Can you tell me whether and when, in the last two years, prior to being housed by the AHH project, you used outpatient medical services at any Albuquerque hospital, other hospital, or clinic? (*If client reports not using outpatient medical services in the 24 months before being housed mark 'No'. If the client reports 'Yes' the goal is to record the number of times the client has used outpatient medical services in the 24 months prior to being housed.*)

0 - No 1 - Yes

110) Can you tell me whether and when, in the last two years, prior to being housed by the AHH project, you used inpatient hospital services at any Albuquerque hospital or other hospital? (If client reports not using inpatient hospital services in the 24 months before being housed mark 'No'. If the client reports 'Yes' the goal is to record the number of times and days the client has used inpatient hospital services in the 24 months prior to being housed inpatient hospital services in the 24 months prior to being housed.)

 $\overline{0 - No}$ 1 – Yes

111) Can you tell me whether and when, in the last two years, prior to being housed by the AHH project, you used outpatient behavioral health services at any Albuquerque hospital, other hospital, or clinic? (If client reports not using outpatient behavioral health services in the 24 months before being housed mark 'No'. If the client reports

Yes' the goal is to record the number of times the client has used outpatient medical services in the 24 months prior to being housed.) _____

0 - No 1 – Yes

I12) Can you tell me whether and when, in the last two years, prior to being housed by the AHH project, you used inpatient behavioral health services at any Albuquerque hospital or other hospital? (If client reports not using inpatient behavioral health services in the 24 months before being housed mark 'No'. If the client reports 'Yes' the goal is to record the number of times and days the client has used inpatient hospital services in the 24 months prior to being

housed.)_

0 - No 1 – Yes

113) Can you tell me whether and when, in the last two years, prior to being housed by the AHH project, you used meal sites an any Albuquerque meal site or other meal site? (If client reports not using meal sites ever in the 24 months before being housed mark 'No'. If the client reports 'Yes' the goal is to record the number of times and days the client has used meal sites for meals in the 24 months prior to being housed. Because clients may have used meal sites extremely frequently it may be necessary to obtain estimates by month. It is also important to obtain the number of meals per day. This means clients may report 3 meals a day at meal sites.)

0 - No 1 - Yes

Interviewer: You should code in the space provided below information for each question related to days homeless per month, emergency room visits by month, inpatient hospital stays (medical and mental health) and number of days by month, and outpatient medical and mental health visits by month. Where appropriate, medical and mental health information should be coded separately. Recall, you are requesting information going back in time beginning at the month before the client became housed in the project. So, Year 1, Month 12 is the first month before the client became housed and Year 2, Month 1 is the 24th month in the past. If practical you may combine above questions to help with client recall

Event History Calendar											
Year 1											
12	11	10	9	8	7	6	5	4	3	2	1
Year 2											
12	11	10	9	8	7	6	5	4	3	2	1

Appendix B: Heading Home Initiative Recruitment Letter and Flyer



Dear

The University of New Mexico's Institute for Social Research and the Albuquerque Heading Home Initiative would like to invite you to participate in a study of the City of Albuquerque's Heading Home Initiative. You have been chosen to participate in this study because you are a client in the program. If you participate in the interview part of the study you will receive \$40 in cash.

What is the study about?

The purpose of the study is to see how well the Heading Home Program works. The City of Albuquerque, through the federal Center for Substance Abuse Treatment, is funding the University of New Mexico's Institute for Social Research to see if your life has improved since you began participating in the Heading Home Program and to see if the Heading Home Program is saving the city money. If you choose to participate in this study you will be helping the Heading Home Program to know how they are doing.

What will I have to do if I choose to volunteer for the study?

If you choose to volunteer for the study you will be asked to participate in an approximately 90 minute interview. During the interview we will ask you questions concerning your housing and living arrangements, medical status, employment/support status, legal status, drug and alcohol use, family history, psychiatric status, and any meal sites that you've visited since being housed in the Heading Home program. We'll also ask you to participate in an annual interview that will last approximately 20 minutes. The follow up interview will include questions that ask how you are doing and feeling and how satisfied you are with the Heading Home program. We'll compensate you for these interviews. We'll compensate you for your time.

We will also ask you to sign a consent form. This consent form will allow us to contact specific places you may have been to in the past and collect records about you from them. The places we will ask you to sign the consent of release form for are local hospitals, local ambulance services, local public behavioral health providers, local law enforcement agencies, the local jail, local emergency shelters, and any other place you might have used services in the last two-years.

Your participation in the study will remain confidential

Any information we gather on you from the places we contact about you and the information you tell us during the interview will remain anonymous and confidential. This means that only our research staff will have access to any information you tell us, we cannot share any information you tell us or that we collect about you with anyone at anytime, and your name will not be tied to any of the information you give us or we collect about you. These rules for confidentiality have been set by the Federal Government and we have to strictly follow these rules.

Again, anything you tell us will remain completely confidential.

Who do I call if I wish to volunteer for the study?

If you wish to volunteer for the study call Paul Guerin at 350-7193 or Alexandra Tonigan at 459-8482 between 8 a.m. and 5 p.m. Monday thru Friday for an appointment. If you like you can also ask your Case Manager to contact us and schedule an appointment at a time good for you.

If you are unsure you want to be a part of the study and have more questions, please call Paul or Alexandra at the above phone numbers and they will be happy to give you more information.



Number: 12-225 Version: 4/6/2015 Approved: 5/22/2015 Expires: 6/6/2016

Institutional Review Board

You Are Invited To Participate In A Study Of The City Of Albuquerque's Heading Home Initiative









YOU ARE INVITED

To participate in a study of the City of Albuquerque's Heading Home Initiative

YOU HAVE BEEN Chosen

To participate in this study because you are a client in the program

IF YOU VOLUNTEER To participate in the interview part of the study you will receive \$40 in cash and \$15 for a second interview

The Study Is Run By:

The University of New Mexico's Institute of Social Research and supported by the Albuquerque Heading Home Initiative



THE STUDY IS CREAT-ED TO FIND:

- How well the Heading Home Program works
- If your life has improved since you began participating in the Heading Home Program
- If the Heading Home Program is saving the city money

IF YOU VOLUNTEER

FOR THE STUDY:

- You will be asked to participate in an approximately 1 1/2 hour interview and then a 20 minute interview a year later
- You will be asked to sign a consent form allowing us to contact specific places you may have been and collect records about you
- We'll compensate you for your time

YOU CAN HELP!

Your participation will help the Albuquerque Heading Home Initiative know how they are doing

CONFIDENTIAL

Your participation will be completely confidential. Any information you tell us or we collect about you will be anonymous and confidential

HOW TO VOLUNTEER

If you wish to volunteer for the study or have any questions please call: Paul Guerin at 350-7193 or Dan Cathey at 280-5255

If you like you can also ask your Case Manager to contact us and schedule an appointment at a time good for you.

WE LOOK FORWARD TO HAVING YOU AS PART OF THE STUDY! Appendix C: Heading Home Initiative Consent for Interview

The University of New Mexico IRB Consent to Participate in Research

City of Albuquerque Heading Home Initiative Cost Study Research Client Interview

Purpose and General Information

You are being asked to participate in a research study that is being done by Paul Guerin, Ph.D., who is the Principal Investigator, and his associates. This research is being done to study the cost effectiveness of the public benefit Heading Home housing program in Albuquerque, New Mexico. You are being asked to participate because you are a Heading Home program client. Approximately 200 people will be eligible to take part in this study at the University of New Mexico. The City of Albuquerque, through the federal Center for Substance Abuse Treatment which funds part of the Heading Home program is also funding this study. This form will explain the study to you, including the possible risks as well as the possible benefits of participating. This is so you can make an informed choice about whether or not to participate in this study. Please read this Consent Form carefully. Ask the investigators or study staff to explain any words or information that you do not clearly understand.

What will happen if I participate?

If you agree to be in this study, you will be asked to read and sign this Consent Form. After you sign the Consent Form, the following things will happen: first, you will be asked to participate in an interview in which we will ask you questions about how long you have lived in Albuquerque, your place of birth, your date of birth, your race/ethnicity, military service history, medical status, employment/support status, legal status, family/social relationships, psychiatric status, and your use of some public services in the last two years and since you've been housed in the program. This will include where you have lived, meal sites and shelters you have visited, emergency room use, inpatient hospital use [medical and behavioral health], and outpatient medical/mental health/substance abuse services use. Participation in this first intake interview will take approximately 90 minutes. Second, we will conduct an annual follow-up interview with study group members who consent to take part in the initial interview noted above and the follow up interview in this services, and indicators of social stability. Participation in the annual follow-up interview will take approximately 20 minutes. There will be at the most two follow-up interviews.

What are the possible risks or discomforts of being in this study?

Every effort will be made to protect the information you give us. However, there is a small risk of loss of confidentiality that may result in a risk of stress, emotional distress, inconvenience, and possible loss of privacy and confidentiality associated with participating in this study.

How will my information be kept confidential?

Your name and other identifying information will be maintained in locked files, available only to authorized members of the research team, for the duration of the study.



Number: 12-225 Version: 5/11/2015 Approved: 5/22/2015 Expires: 6/6/2016

Institutional Review Board

For any information entered into a computer, the only identifier will be a unique study identification (ID) number.

Any personal identifying information and any record linking that information to study ID numbers will be destroyed when the study is completed. Information resulting from this study will be used for research purposes and may be published; however, you will not be identified by name in any publications. Information from your participation in this study may be reviewed by study staff, federal and state regulatory agencies, and by the UNM IRB which provides regulatory and ethical oversight of human research.

What are the costs of taking part in this study?

There is no cost to participating in this interview.

What are the benefits to being in this study?

There may or may not be direct benefit to you from being in this study. However, your participation may help find out the cost effectiveness of this program. We hope that information gained from this study will help the City of Albuquerque better understand the cost effectiveness of this program, thus the results may indirectly benefit you.

What other choices do I have if I don't participate?

Taking part in this study is voluntary so you can choose not to participate.

Will I be paid for taking part in this study?

You will be compensated for your participation in the interviews. For your participation and completion of an approximately 90 minute intake interview you will be compensated with \$40.00 cash. For your participation and completion of no more than 2 annual follow-up interviews that will last approximately 20 minutes you will be compensated with \$15.00 cash for each follow-up interview.

Can I stop being in the study once I begin?

Yes. You can withdraw from this study at any time without affecting your participation in the Housing First program or you may decline to answer questions you do not wish to answer. The investigators have the right to end your participation in this study if they determine that you no longer qualify to take part, if you do not follow study procedures, or if it is in your best interest or the study's best interest to stop your participation. The Sponsor may stop the study at any time.

Refusal to Sign

If you choose not to sign this consent form you will not be allowed to take part in the research study.

What if I have questions or complaints about this study?

If you have any questions, concerns or complaints at any time about the research study, Paul Guerin, Ph.D., or his associates will be glad to answer them at 505-277-4257 Monday thru Friday from 8 a.m. to 4 p.m.



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If you would like to speak with someone other than the research team, you may call the UNM IRB office at (505) 277-2644.

The IRB is a group of people from UNM and the community who provide independent oversight of safety and ethical issues related to research involving human subjects.

What are my rights as a research subject?

If you have questions regarding your rights as a research subject, you may call the IRB at (505) 277-2644 or visit the IRB website at http://irb.unm.edu.

Consent and Authorization

You are making a decision whether to participate in this study. Your signature below indicates that you read the information provided (or the information was read to you). By signing this Consent Form, you are not waiving any of your legal rights as a research subject.

I have had an opportunity to ask questions and all questions have been answered to my satisfaction. By signing this Consent Form, I agree to participate in this study and give permission for my health information to be used or disclosed as described in this Consent Form. A copy of this Consent Form will be provided to me.

Name of Adult Participant (print)

Signature of Adult Participant Date

I have explained the research to the subject and answered all of his/her questions. I believe that he/she understands the information in this consent form and freely consents to participate.

Name of Research Team Member

Signature of Research Team Member/Date



Appendix D: Heading Home Initiative Consent for Record Review

The University of New Mexico IRB Consent to Participate in Research

City of Albuquerque Heading Home Initiative Cost Study Research Client Record Review

Purpose and General Information

You are being asked to participate in a research study that is being done by Paul Guerin, Ph.D., who is the Principal Investigator, and his associates. This research is being done to evaluate study the cost effectiveness of the public benefit Heading Home housing program in Albuquerque, New Mexico. You are being asked to participate because you are a Heading Home program client. Approximately 180 people will be eligible to take part in this study at the University of New Mexico. The City of Albuquerque, through the federal Center for Substance Abuse Treatment which funds part of the Heading Home program is also funding this study.

This form will explain the study to you, including the possible risks as well as the possible benefits of participating. This is so you can make an informed choice about whether or not to participate in this study. Please read this Consent Form carefully. Ask the investigators or study staff to explain any words or information that you do not clearly understand.

What will happen if I participate?

If you agree to be in this study, you will be asked to read and sign this Consent Form. After you sign the Consent Form, the following things will happen: we will request access to your records at the following agencies:

1. Bernalillo County Metropolitan Detention Center (MDC) for any booking records from January 2000 through now that includes the booking date, release date, and booking charges.

2. Albuquerque Central Metropolitan Intake (AMCI) for any substance abuse assessment records from January 2000 through current that includes the assessment date, the result of the assessment, any referral information to a substance abuse treatment provider, the number and type of services, and the total cost of treatment.

3. Albuquerque Ambulance Service (AAS) for any ambulance pickups and transports from January 2000 through current that includes the date of the pickup, the type of transport, the location of the transport, and the cost of the transport.

4. Bernalillo County Metropolitan Assessment Treatment Services (MATS) for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include detoxification services, case management services, and substance abuse treatment services.

5. University of New Mexico Psychiatric Center (UNMPC) for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include screening/assessment, outpatient, and inpatient services.

6. University of New Mexico Hospital (UNMH) for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include emergency, outpatient, and inpatient services.



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7. Lovelace Hospital (LH) for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include emergency, outpatient, and inpatient services.

8. Presbyterian Hospital (PHS) for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include emergency, outpatient, and inpatient services.

9. Veteran Administration Hospital (VA) for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include emergency, outpatient, and inpatient services.

10. Local Emergency Shelters to include Albuquerque Rescue Mission, Good Shepherd Center, Barrett House, Albuquerque Opportunity Center, and Joy Junction. Requested information may include begin date of sheltering, end date of sheltering, and the cost per day of sheltering.

11. Albuquerque Police Department (APD) and Bernalillo County Sheriff's Office (BCSO) arrests. This will include the date of each arrest, whether the individual was transported to Jail or cited, and the arrest charges.

12. Albuquerque Fire Department (AFD) and Bernalillo County Fire Department (BCFD) call responses and any transports to any hospital emergency room, emergency shelter, MATS, or any other location between January 2000 through current. Requested information may include the date of transport, type of transport (i.e. emergency vehicle or fire truck), reason for transport (i.e. medical, mental health, drug or alcohol, etc) and cost of transport.

13. Albuquerque Health Care for the Homeless, St. Martins Hospitality Center, and the City of Albuquerque Assertive Community Treatment teams for any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include medical services, dental services, mental health services, substance abuse treatment services, enabling services, case management services, social work services, nursing services, and any other services any of these agencies might provide.

14. OptumHealth New Mexico manages behavioral health benefits statewide for the New Mexico Behavioral Health Collaborative (BHC). The Collaborative is intended to be a single statewide behavioral health delivery system in which all state and federal funds that pass through the state are managed. This includes serving as the single state entity that monitors service utilizations and reimburses providers. We will request any record of services received between January 2000 through current that includes the begin date of services, the end date of services, the number and type of services, and the cost of services. This could include mental health services, shelter care, safehouse, respite, forensic, halfway house, residential treatment programs, mental health screening, alcohol and drug screening, detoxification, intensive outpatient, day treatment, supported

employment, activity therapy, behavioral health treatment, and assessment services.

15. Meal sites like Project Share, Albuquerque Rescue Mission, Brothers of the Good Shepherd, and Noon Day. We will request any record of services received between January 2000 through current that includes the date of any meal, the meal type (breakfast, lunch, dinner), and the cost of the

meal.





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What are the possible risks or discomforts of being in this study?

Every effort will be made to protect the information you give us. However, there is a small risk of loss of confidentiality that may result in a risk of stress, emotional distress, inconvenience, and possible loss of privacy and confidentiality associated with participating in this study.

How will my information be kept confidential?

Your name and other identifying information will be maintained in locked files, available only to authorized members of the research team, for the duration of the study. For any information entered into a computer, the only identifier will be a unique study identification (ID) number. Any personal identifying information and any record linking that information to study ID numbers will be destroyed when the study is completed. Information resulting from this study will be used for research purposes and may be published; however, you will not be identified by name in any publications.

Information from your participation in this study may be reviewed by study staff, federal and state regulatory agencies, and by the UNM IRB which provides regulatory and ethical oversight of human research.

What are the benefits to being in this study?

There may or may not be direct benefit to you from being in this study. However, your participation may help find out the cost effectiveness of this program. We hope that information gained from this study will help the City of Albuquerque better understand the cost effectiveness of this program, thus the results may indirectly benefit you.

What other choices do I have if I don't participate?

Taking part in this study is voluntary so you can choose not to participate.

Will I be paid for taking part in this study?

You will not be compensated for your participation in this part of the study.

Can I stop being in the study once I begin?

Yes. You can withdraw from this study at any time without affecting your participation in the Housing First program.

The investigators have the right to end your participation in this study if they determine that you no longer qualify to take part, if you do not follow study procedures, or if it is in your best interest or the study's best interest to stop your participation. The Sponsor may stop the study at any time.

Authorization for Use of Your Protected Health Information (HIPAA)

As part of this study, we will be collecting health information about you and will not be sharing it with others. This information is "protected" because it is identifiable or "linked" to you.

Protected Health Information (PHI)

By signing this Consent Document, you are allowing the investigators and other authorized personnel to use your protected health information for the purposes of this study. This information may include: arrest and booking information, substance abuse treatment information, medical information, mental health information, ambulance service information, and emergency shelter information.

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In addition to researchers and staff at UNM and other groups listed in this form, there is a chance that your health information may be shared (re-disclosed) outside of the research study and no longer be protected by federal privacy laws. Examples of this include disclosures for law enforcement, judicial proceeding, health oversight activities and public health measures.

Right to Withdraw Your Authorization

Your authorization for the use of your health information for this study shall not expire unless you cancel this authorization. Your health information will be used as long as it is needed for this study. However, you may withdraw your authorization at any time provided you notify the UNM investigators in writing. To do this, please send a HIPAA Research Withdrawal Form or letter notifying them of your withdrawal to:

Paul Guerin, Ph.D. Institute for Social Research University of New Mexico MSC 04 2520 1 University of New Mexico Albuquerque New Mexico 87131

Please be aware that the research team will not be required to destroy or retrieve any of your health information that has already been used or shared before your withdrawal is received.

Refusal to Sign

If you choose not to sign this consent form and authorization for the use of your PHI, you will not be allowed to take part in the research study.

What if I have questions or complaints about this study?

If you have any questions, concerns or complaints at any time about the research study, Paul Guerin, Ph.D., or his associates will be glad to answer them at 505-277-4257 Monday thur Friday from 8 a.m. to 4 p.m.. If you would like to speak with someone other than the research team, you may call the UNM IRB office at (505) 277-2644. The IRB is a group of people from UNM and the community who provide independent oversight of safety and ethical issues related to research involving human subjects.

What are my rights as a research subject?

If you have questions regarding your rights as a research subject, you may call the IRB at (505) 277-2644 or visit the IRB website at <u>http://irb.unm.edu</u>.



Initials

Consent and Authorization

You are making a decision whether to participate in this study. Your signature below indicates that you read the information provided (or the information was read to you). By signing this Consent Form, you are not waiving any of your legal rights as a research subject.

I have had an opportunity to ask questions and all questions have been answered to my satisfaction. By signing this Consent Form, I agree to participate in this study and give permission for my health information to be used or disclosed as described in this Consent Form. A copy of this Consent Form will be provided to me.

Name of Adult Participant (print)

Signature of Adult Participant Date

I have explained the research to the subject and answered all of his/her questions. I believe that he/she understands the information in this consent form and freely consents to participate.

Name of Research Team Member

Signature of Research Team Member





Appendix E: Heading Home Follow up Interview

(FOLLOWUP SECTION: QUESTIONS TO BE ASKED AT FOLLOW UP ONLY)

J. QUALITY OF LIFE

J1) Overall, to what extent has your quality of life improved since entering this program?

◊A lot	\$Somewhat	

J2) Overall, how satisfied are you with your housing situation since entering this program?

♦A lot ♦Somewhat ♦A little ♦Not at all

K. SERVICES

K1) Overall, how helpful has the Albuquerque Heading Home project been in meeting your housing and other needs?

O Very helpful O Helpful O Somewhat helpful O Not helpful

K2) Circle the response that best represents the extent that the respondent AGREES or DISAGREES with each statement. Use the space provided for any added comments.

Since becoming housed	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Comments by Interviewee
I deal more effectively with daily problems.	5	4	3	2	1	
I am better able to control my life.	5	4	3	2	1	
I am not using drugs as much.	5	4	3	2	1	
I am not using drugs at all.	5	4	3	2	1	
I am not using alcohol as much.	5	4	3	2	1	
I am not using alcohol at all.	5	4	3	2	1	1
My physical health is improved.	5	4	3	2	1	
My mental health is improved.	5	4	3	2	1	1
My personal and family relationships have improved.	5	4	3	2	1	
I feel more a part of my community.	5	4	3	2	1	
I have increased contact with family members.	5	4	3	2	1	
I feel better about myself.	5	4	3	2	1	
I have a greater sense of freedom.	5	4	3	2	1	
My overall quality of life has improved.	5	4	3	2	1	
I have a greater sense of independence.	5	4	3	2	1	
I feel that I am socializing more.	5	4	3	2	1	
I feel that my learning ability has improved.	5	4	3	2	1	
I notice myself helping others more.	5	4	3	2	1	
My eating habits have improved.	5	4	3	2	1	
I am eating healthier food.	5	4	3	2	1	

K3) Why would you say that the Housing Services program has been <u>(client's response from 1)</u>? Explanation:

K4) How could the Housing First program be more helpful to individuals in your situation?

K5) Can you describe what would be an ideal process for helping individuals in need of housing?

L INDICATORS OF SOCIAL STABILITY

		PAST 30 DAYS, HOW MANY TIMES HAVE YOU VISITED MEA HICH MEAL SITES HAVE YOU VISITED	L SITES?	_MPD
L2) Du followir	-	e past 30 days, how many days have you used the		
	a.	Any alcohol		
	b1.	Alcohol to intoxication (5+ drinks in one sitting)	II	
	b2.	Alcohol to intoxication (4 or fewer drinks in one sitting and felt high)	II	
	c.	Illegal drugs	J]	
	d.	Both alcohol and drugs (on the same day)	I[
L3) In tl	he past	30 days, how many times have you been arrested?	Times	
(IF NO	ARRE	STS, SKIP TO ITEM K3)		
L4) In tl	he past	30 days, how many nights have you spent in jail/prison?	Nights	
L5) How	v woul	d you rate your overall health right now?		
	1. Exce 2. Very	y good		

Good
 Fair
 Poor

L6) During the past 30 days, did you receive:

Inpatient Treatment for:	Yes	No	If yes, how many nights
Physical complaint			
Mental or emotional difficulties			
Alcohol or substance abuse			
Outpatient Treatment for:			
Physical complaint			
Mental or emotional difficulties			
Alcohol or substance abuse			
Emergency Room Treatment			
for:			
Physical complaint			
Mental or emotional difficulties			
Alcohol or substance abuse			

L7) In the past 30 days, not due to your use of alcohol or drugs, how many days have you:

	Days	RF	DK
a. Experienced serious depression		0	0
b. Experienced serious anxiety or tension		0	0
c. Experienced hallucinations		0	0
d. Experienced trouble understanding, concentrating, or remembering		0	0
e. Experienced trouble controlling violent behavior		0	0
f. Attempted suicide		0	0
g. Been prescribed medication for psychological/emotional problem	<u> </u>	0	0

(IF CLIENT REPORTS ZERO DAYS, RF OR DK TO ALL ITEMS IN QUESTION K7, SKIP TO K9)

L8) How much have you been bothered by these psychological or emotional problems in the past 30 days?

- 1. Not at all
- 2. Slightly
- 3. Moderately
- 4. Considerably
- 5. Extremely

L9) Is there anything else you would like to add?

That concludes our interview. I would like to thank you for your time and participation.