# Supportive Housing in Illinois:

## A Wise Investment

The Heartland Alliance
Mid-America Institute on Poverty

**April 2009**

HEARTLAND ALLIANCE

An executive summary and electronic version of the full report are available at www.heartlandalliance.org/research, www.supportivehousingproviders.org, and www.csh.org.

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**Research Team:**

Alyssa Nogaski, Amy Rynell, Amy Terpstra, and Helen Edwards (formerly)—*The Heartland Alliance Mid-America Institute on Poverty*

**Advisors:**

Janet Smith—*College of Urban Planning and Public Affairs, University of Illinois at Chicago*

Jacquelyne Anderson, Carol Wilkins, Sue Augustus, Katrina Van Valkenburgh, and Stephanie Hartshorn—*Corporation for Supportive Housing*

Patricia Abrams, Lore Baker (SHPA), Arturo Bendixen, Jim Flosi, Andrew Geer (Chair), Janet Hasz (SHPA Executive Director), Diana Knaebe, Mike Nance, Brad Roos, Fred Spannous, and Tony Zipple—*SHPA Evaluation Committee members*

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The Heartland Alliance Mid-America Institute on Poverty (MAIP) provides dynamic research and analysis on today's most pressing social issues and solutions to inform and equip those working toward a just global society. As such, MAIP:

- Conducts research to increase the depth of understanding and profile of social issues and solutions;
- Develops recommendations and action steps;
- Communicates findings using media, briefings, and web strategies to influence a broad base of decision makers; and
- Impacts social policy and program decisions to improve the quality of life for poor and low-income individuals.

For more information: 773.336.6075 | research@heartlandalliance.org | www.heartlandalliance.org/research

**Supportive Housing Providers Association**

The Supportive Housing Providers Association (SHPA) is a statewide association of organizations who provide supportive housing. SHPA enables increased development of supportive housing and supports organizations that develop and operate permanent supportive housing. The Supportive Housing Providers Association:

- Connects its member organizations, both staff and residents, with each other, with best practices, and with state/national policymakers and funders;
- Educates stakeholders regarding the efficacy and cost effectiveness of supportive housing; and
- Advocates for increased and integrated resources for supportive housing.

For more information: 773.588.0827 | supportivehsg@aol.com | www.supportivehousingproviders.org

**Corporation for Supportive Housing** (providing technical assistance for the study)

Established in 1992, the Corporation for Supportive Housing Illinois office works to promote the development of supportive housing to end long-term homelessness through three core products and services:

- Capacity building to enhance the supportive housing industry's skills and knowledge, so that the field has a greater ability to deliver high-quality housing and services over the long term;
- Financial and technical assistance to partners to expand the supply, availability, and variety of supportive housing;
- Promoting policy reforms and coordinated systems that make supportive housing easier to develop and operate.

For more information: 312.332.6690 | ilinfo@csh.org | www.csh.org

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# Summary

Supportive housing is permanent affordable housing coupled with supportive services that enables residents to achieve long-term housing stability. Residents include people who were homeless and those who have serious and persistent issues such as mental illness, chronic health problems, and substance use.

This analysis focused on 177 supportive housing residents in Illinois and the impact of supportive housing on their use of expensive, primarily publicly-funded services. Analysis compared the 2 years before they entered supportive housing with the 2 years after. Data were collected on these residents from Medicaid, mental health hospitals, substance use treatment, prisons, and various county jails and hospitals.

**Key Findings**

- There were cost savings in every system studied from pre- to post-supportive housing. There was a 39 percent reduction in the total cost of services from pre- to post-supportive housing with an overall savings of $854,477. This was an average savings of $4,828 per resident for the 2-year time period or $2,414 per resident, per year.

- Once in supportive housing, residents who had previously lived in more restrictive settings (i.e., nursing homes, mental health hospitals, and prisons) were unlikely to return.

- Residents shifted the type and volume of services they used—from a high reliance on expensive Inpatient/Acute services before supportive housing to less expensive Outpatient/Preventive services after supportive housing.

- Residents reported an increased quality of life after the supportive housing intervention. Not only did their housing stabilize, but their health improved, and they experienced less stress.

The cost savings from supportive housing is likely to be much higher than reported here. A number of costs were infeasible to include or beyond the scope of this analysis, including the homeless system and related costs, substance use treatment costs, social costs, and many others. Also, cost savings likely continued in the years following this study time frame.

In sum, supportive housing reduced the volume of publicly-funded services residents used, changed the type of services used, and resulted in a significant cost savings over time.

***Residents' Perspectives:***
During in-depth interviews and a roundtable discussion with supportive housing residents, many indicated a variety ways their lives had improved after entering supportive housing. Residents reported they:

- Learned how to pay bills
- Were able to be reunited with children and family
- Were able to save, especially for a car
- Experienced health improvements
- Were able to abstain from substance use
- Did not feel pressure to do things that they used to do, such as illegal activities
- Felt they had compassion and they could give back to others
- Believed in themselves
- Had more confidence in themselves
- Felt like a human being again
- Were able to be around positive people and create a more positive outlook for themselves

# Introduction

Supportive housing is permanent affordable housing coupled with supportive services that aims to enable residents to remain housed and ensure long-term housing stability. Supportive housing is traditionally operated by nonprofit organizations specializing in service provision or affordable housing.

Supportive housing is different from other housing models which are time limited or only for emergency use, such as shelters and transitional living situations. Individuals and families in supportive housing include not only people who are homeless, but also those at risk of homelessness because of serious and persistent issues such as mental illness and substance use. Supportive housing plays a vital role in ending long-term homelessness for many people. It also serves a prevention function for vulnerable individuals and families who would likely experience protracted and multiple spells of homelessness without the housing and services present in supportive housing models.[1]

Permanent supportive housing:

- **Is affordable to people with low incomes**—generally requiring them to pay no more than a third of their income for the housing.
- **Is safe, accessible, and is integrated into the community**.
- **Takes many forms** including individual scattered apartment units, entire apartment buildings of varying sizes, and single family homes.
- **Has comprehensive support services** closely connected to or integrated into the housing. Supportive housing providers offer case management, which includes life skills training and linkages to other needed services such as physical and mental health services, substance use treatment and support, and employment services.
- **Enables** families and individuals to attain housing stability.
- **Is flexible,** allowing providers to tailor services to individuals' unique needs.
- **Is cost effective** as shown by research in other states.[2]
- **Leverages large amounts of federal funding.** The bulk of supportive housing funding (most of it for construction and ongoing operation) comes from federal sources. A relatively small amount of state funding for services, capital, and operating support leverages the funding from federal sources.

A growing body of research suggests that stabilizing individuals in supportive housing also reduces their use of expensive public crisis services such as emergency rooms, psychiatric hospitals, jails, and substance use treatment programs.[3] Furthermore, these cost decreases may offset a portion of permanent supportive housing expenditures, thus making investment in this housing model attractive to policymakers and others who seek to maximize the value of public resources invested in programs aimed at reducing and eliminating homelessness.

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[1] Corporation for Supportive Housing. (2008). *Ending long-term homelessness through supportive housing: How close are we to our goal?* Washington, DC: Author.
[2] Proscio, T. (2000). *Supportive housing and its impact on the public health crisis of homelessness*. San Francisco: Goldman School of Public Policy at the University of California at Berkeley; and Culhane, D. et al. (2002). *The New York/New York agreement cost study: The impact of supportive housing on services use for homeless mentally ill individuals*. Philadelphia: Center for Mental Health Policy and Services Research, University of Pennsylvania.
[3] Caton, C., Wilkins, C., & Anderson, J. (2007). *People who experience long-term homelessness: Characteristics and interventions.* Oakland, CA: United States Department of Housing and Urban Development.

In Illinois there are approximately:[4]

- 6,000 units of permanent supportive housing,
- serving over 8,000 men, women, and children,
- run by 120 providers,
- in 28 counties.

Still, there is a substantial gap between supply and demand for permanent supportive housing in Illinois. According to the Illinois Housing Task Force, it is estimated that 3,200 families, 500 youth aging out of foster care, and 2,000 people leaving nursing homes and Institutes for Mental Disease need supportive housing. The Supportive Housing Working Group of the Task Force has concluded that in order to significantly reduce homelessness over the next 7 years in Illinois and to meet documented need, an additional 7,700 units of supportive housing needs to be created or preserved.[5]

[4] These numbers are estimates based on data provided by the Supportive Housing Providers Association.
[5] Supportive Housing Working Group of the Illinois Housing Task Force (2008, August). *Supportive Housing Working Group final report.*

## Previous Research on Supportive Housing

There is a growing body of literature that examines the impact of supportive housing on people's use of public services, such as health and mental health services and incarceration. Overwhelmingly, research has shown that supportive housing decreases the amount of expensive state services people use, instead shifting use to less expensive, more appropriate services.

An evaluation of supportive housing in Maine showed that after being housed, residents received 35 percent more mental health services, but with a 41 percent cost reduction.[6] The residents shifted from using expensive inpatient psychiatric care and emergency services to less expensive outpatient mental health services. This study was also able to capture criminal justice costs such as police contact, which was reduced 66 percent after the supportive housing intervention.

An evaluation of a supportive housing project in Rhode Island found that of the 80 percent of residents who remained housed for 18 months or more, each reduced their service costs an average of $9,500 the first year after entering supportive housing.[7] In addition to saving money, resident interviews revealed insight into the satisfaction of the residents. Ninety-three percent of residents reported being very dissatisfied with their housing situation the year before entering their supportive housing apartment. After the supportive housing intervention, 78 percent of the clients were very satisfied and 12 percent were somewhat satisfied. The residents also felt that they were making great progress in their personal health, mental health, and social goals.

A large comprehensive study of 4,679 supportive housing residents in New York City found that the supportive housing intervention was associated with a dramatic decrease in homelessness.[8] It also showed that when people experiencing homelessness who have a mental illness are housed they decrease the use of expensive services such as inpatient care, nursing homes, and corrections placements. This study found that the cumulative cost for each person in the study was $40,451 (1999 dollars) per year in health, corrections, and shelter use before supportive housing. After the supportive housing intervention, residents had an average reduction in service use of $16,281 per housing unit per year. The researchers concluded that for a small cost to the public, homelessness could be dramatically reduced with investments in supportive housing.

The Illinois-based Supportive Housing Providers Association commissioned the Heartland Alliance Mid-America Institute on Poverty to conduct a cost-study of permanent supportive housing in Illinois. The study focused on 177 adult supportive housing residents from 11 different counties across Illinois. Using public agency data, the study tracked individuals' use of primarily publicly-funded services before they entered supportive housing, comparing it to their use of services after they entered supportive housing. This study of supportive housing in Illinois adds to the growing body of research on supportive housing as an effective and cost-efficient solution to homelessness. The hypothesis of the *Study of Supportive Housing in Illinois* was that the supportive housing intervention reduces a person's reliance on expensive, primarily publicly-funded services.

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[6] Mondello, M., Gass, A., McLaughlin, T., & Shore, N. (2007). *Cost of homelessness: Cost analysis of permanent supportive housing.* Portland, ME: MaineHousing.

[7] Hirsch, E., & Glasser, I. (2007). *Rhode Island's housing first program first year evaluation*. Providence, RI & Bristol, RI: Providence College & Roger Williams University.

[8] Culhane, D., Metraux, S., & Hadley, T. (2002). Public service reductions associated with placement of homeless person with severe mental illness in supportive housing. *Housing Policy Debate, 13*(1), 107-163.

# Methodology

## Research Design

The purpose of this study was to investigate how permanent supportive housing impacts residents' reliance on primarily publicly-funded services. The key research questions were:

1. Does living in supportive housing change the **volume** of publicly-funded services residents use?
2. Does living in supportive housing change the **type** of publicly-funded services residents use?
3. Does living in supportive housing decrease the **cumulative cost** of services residents use?

The study was structured as a repeated measures panel design, using a 4-year time period for each resident. The data were divided into pre- and post-time periods, each time period being 2 years. The analysis compared the volume, type, and cost of services each resident used in the 2 years before supportive housing to the 2 years after they entered supportive housing. This allowed distinct patterns to emerge and be identified. Previous studies of supportive housing conducted in Connecticut[9] and San Francisco[10] used this methodology as well.

It was not feasible to design this study with a control group due to data limitations. In Illinois there is not a statewide integrated Homeless Management Information System that tracks individuals through the shelter and/or homeless systems. Therefore, it was not possible to form a control group from waiting lists as there was no way to determine if the individuals are not already living in supportive housing or in some other housing arrangement during the duration of the study.

## Enrollment and Data Collection

In an earlier study in 2004, The Heartland Alliance Mid-America Institute on Poverty surveyed 118 supportive housing providers in Illinois to learn about the populations they served and services that were offered at their respective projects.[11] These providers and projects were identified through lists provided by the Supportive Housing Provider's Association, the Corporation for Supportive Housing, the Chicago Department of Human Services, and the Illinois Department of Human Services.

For this study, those providers that indicated they served individuals who are homeless or at risk of homelessness, who have a mental illness and/or who are formerly incarcerated, and that had been in operation for at least 1 year, were invited to participate in the study. Of the 43 providers that were eligible, 31 agreed to participate.

The 31 projects were located in 11 counties across the state. Six projects operated scattered site units, where residents live off-site, and 25 projects operated congregate units. In a congregate housing setting, clients have private rooms but sometimes share common areas with onsite supportive services. Six projects had units for families and for individuals, and 25 projects housed only individuals.[12] The

[9] Arthur Andersen, LLP; Center for Mental Health Policy and Services Research, University of Pennsylvania; Sherwood, K.E.; & TWP Consulting. (2000). *Connecticut Supportive Housing Demonstration Program: Final program evaluation report,* New Haven, CT: Corporation for Supportive Housing.

[10] Martinez, T., & Burt, M. (2006). Impact of permanent supportive housing on the use of acute care health services by homeless adults. *Psychiatric Services, 57*(7), 992-999.

[11] The Heartland Alliance Mid-America Institute on Poverty. (2005, February). *Snapshot of permanent supportive housing in Illinois*. Chicago: Author.

[12] 33 participants lived in a supportive housing project with scattered site units and 443 participants lived in a supportive housing project with congregate units.

participating supportive housing providers signed research agreements with the Heartland Alliance Mid-America Institute on Poverty that established roles and expectations.

Recruitment for the study ran from February to September 2006. To get a cross-section of the typical composition of Illinois supportive housing residents at a given time, all residents in the supportive housing projects at the time of recruitment were eligible for the study, regardless of how long they lived there or their reasons for living there. Prior to recruitment visits, researchers sent the providers flyers to distribute to residents announcing the study and the date of the recruitment visit. Researchers then held brief meetings with interested residents to describe the evaluation, answer any questions, ask for their participation in the study, and read the consent and release of information forms aloud. Participants were given a $5 gift card for their time.

Once consent was given, researchers administered a simple enrollment survey to participating residents to collect information on demographics, special needs, living situation prior to the supportive housing intervention, history of homelessness, county jail history, hospital use, employment history, and sources of income. Researchers also collected consenting residents' Social Security numbers and dates of birth.

A total of 476 residents signed informed consent and release of information forms and were officially enrolled in the study. See Appendix A for information on the 2004 initial provider survey and complete demographic information for all 476 individuals enrolled in the study.

Researchers then submitted data requests for information on service utilization to the following six systems: (see Appendix B for more detail on each system)

- **Medicaid: Illinois Department of Healthcare and Family Services:** Medicaid is a state-administered health insurance program that is available only to people with limited income and who meet certain eligibility requirements.
- **State Mental Health Hospitals: Illinois Department of Human Services' Division of Mental Health:** The Division of Mental Health in Illinois operates inpatient mental health hospitals for adults and youth with mental disabilities which are not funded through Medicaid. The goal of inpatient mental health hospitals is to help people through crises, stabilize them, and move them forward using outpatient services once they leave.
- **Substance Use Treatment: Illinois Department of Human Services' Division of Alcoholism and Substance Abuse:** The Division of Alcoholism and Substance Abuse is responsible for coordinating all programs that deal with problems resulting from substance use. They focus on prevention, intervention, treatment, and rehabilitation for alcohol and other drug dependency.
- **State Prisons: Illinois Department of Corrections:** Data requests were sent only if study participants indicated on the study enrollment survey that they had previously spent time in a state prison. Researchers did not collect information on reasons for time spent in state prisons.
- **County Jails:** Data requests were sent only if study participants indicated on the study enrollment survey that they had previously spent time in a county jail. Researchers did not collect information on reasons for time spent in county jails.
- **Uncompensated Hospital Services:** Since not all individuals were receiving Medicaid during the entire study period, participants were asked which local hospitals they used during the study period, and then signed a consent form for the release of their medical records from the indicated hospitals. There is a small chance that some in the sample had private insurance; however, due to the demographics of the sample and their lack employment, this is very unlikely.

The data requests to all entities were for the time period of July 1, 1999 to June 30, 2006. The beginning of this date range was determined by a data system change for the Division of Mental Health (no data prior to July 1999 were available in their current system).

Researchers obtained dates of entry for each resident enrolled in the study from the supportive housing providers. With these entry dates, researchers divided the collected data into a pre-supportive housing and a post-supportive housing time frame for each participant. Out of the 476 people initially recruited for the study, 177 people had complete data for their 2 pre-supportive housing years and 2 post-supportive housing years. In order to look at the effects of supportive housing over a 2-year time frame and be as comprehensive as possible, this report focuses on this 177 person sub-sample.

In addition, researchers conducted interviews with a small group of supportive housing residents to provide a context of personal experiences and specific life changes to supplement the quantitative data.

## Analysis

The following analysis of the service use of Illinois supportive housing residents before and after the supportive housing intervention includes service use within six different systems: Medicaid-reimbursed services, uncompensated hospital services, state mental health hospitals, state-sponsored substance use treatment services, state prisons, and county jails.

Researchers analyzed pre- and post-data in the following ways:

1. **Within each of the six systems studied, researchers analyzed aggregate users, uses, and cost.**
    - A "user" is an individual that used a service during the time frame.
    - A "use" is calculated when a user has consumed a service, such as a billable service through Medicaid, or spent time in prison. For overnight services (inpatient medical care, inpatient psychiatric care, nursing homes, mental health hospitals, state prisons, and county jails), a use is one overnight stay. For other services, a use is one contact with a service provider.
    - Researchers used a different method of calculating "costs" for each system studied; see Table 1 below for more details on cost data sources. All cost data from 1999 to 2006 were inflated to 2007 dollar amounts.

2. **Within each of the six systems studied, researchers analyzed service-type categories; see Table 2 below for more details.**
    - Inpatient/Acute: Services in this category are primarily expensive, overnight, and for emergency situations.
    - Outpatient/Preventive: Services in this category are less expensive, stabilizing, maintenance, and preventive care.
    - Incarceration: This includes county jails and state prisons.

3. **Across all systems researchers looked within the above service-type categories at change in use and overall cost savings in addition to use of multiple systems.**

**Table 1: Cost Data Sources**

| Cost Data | Data Source |
|---|---|
| Medicaid | The Illinois Department of Health and Family Services |
| State prison | The Illinois Department of Corrections |
| County jails | The Illinois Department of Corrections: Adult Institutions Daily Cost, 2007 |
| Mental health hospitals | The Illinois Department of Mental Health |
| Uncompensated hospital services | The Illinois Department of Health and Family Services. The average Medicaid reimbursable amount per diem was assigned to each uncompensated hospital service. |
| Substance use treatment services | Costs for substance use treatment services are not included due to limitations in the data system of the Department of Human Services, Division of Alcohol and Substance Abuse. |

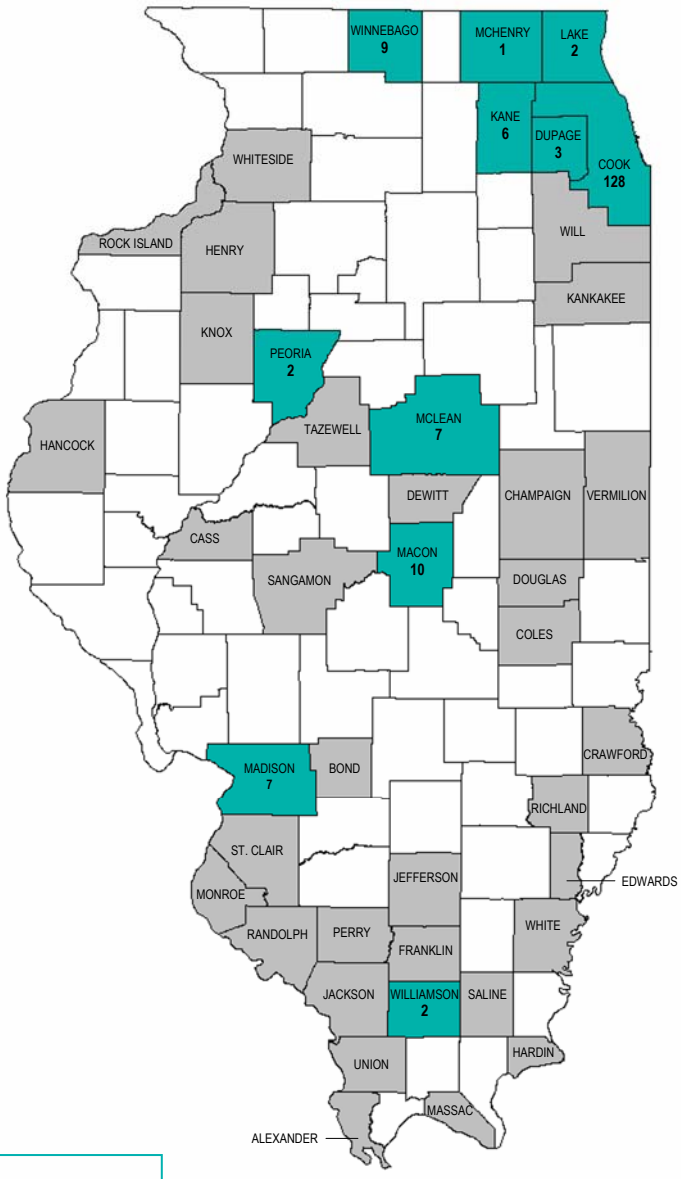
**Table 2: Service-Type Categories for Each System**

| | Inpatient/Acute Services | Outpatient/Preventive Services | Incarceration |
|---|---|---|---|
| **Medicaid-Funded Services** | Inpatient medical care | Pharmacy | |
| | | Home health & medical equipment | |
| | Inpatient psychiatric care | Outpatient medical care | |
| | | Outpatient psychiatric care | |
| | Nursing homes | Physician care | |
| | | Care by other providers | |
| | Ambulance | Dental care | |
| **Uncompensated Hospital Services** | Inpatient medical care | Outpatient medical care | |
| | Inpatient psychiatric care | Outpatient psychiatric care | |
| | Emergency room | Outpatient care: Type unknown | |
| **Substance Use Treatment Services** | Residential rehabilitation | Outpatient treatment | |
| | Halfway house | Case management | |
| | Recovery home | Toxicology | |
| | Detoxification | | |
| **State Mental Hospitals** | Inpatient mental hospital | | |
| **State Prisons** | | | State prisons |
| **County Jails** | | | County jails |

## Background on Study Participants

177 residents in the study had complete data for their 2 pre-supportive housing years and 2 post-supportive housing years. In order to look comprehensively at the effects of supportive housing over a 2-year time frame, this report focuses on this 177 person sample, which had the following characteristics:

- They had been in supportive housing for an average of 38 months. Time in supportive housing ranged from 21 months to 63 months.
- They had an average age of 42 at time of the study enrollment, ranging from 18 to 68 years of age.
- Over half (52 percent) were male and 48 percent were female.
- Sixty-nine percent were African American, 26 percent White, 4 percent Latino, and 0.6 percent other.
- Six percent identified themselves as veterans.
- In the week prior to entry into supportive housing, 39 percent lived in a homeless shelter or transitional housing, 16 percent were living doubled up with family or friends, almost 10 percent were unsheltered, and 9 percent were in some type of facility (nursing home, jail, treatment center, etc.).
- They were from 26 supportive housing projects in 11 counties in Illinois.
- Almost 65 percent of the sample was receiving food stamps. Over a third of residents in the sample were receiving Social Security Income and over 40 percent were receiving Medicaid. Roughly 21 percent had employment income.




*Counties with supportive housing projects*

*Counties with supportive housing projects participating in the study and number of residents enrolled in the study*

## Results: System-Specific Analysis

### Medicaid-Reimbursed Service Use
***Illinois Department of Health and Family Services***

Eighty-four residents of the 177 person sample used a Medicaid-reimbursed service pre-supportive housing and 102 used a Medicaid-reimbursed service post-supportive housing. See Table 3 for percent change for each service from pre- to post-supportive housing. Appendix C includes the full data for Medicaid-funded service utilization and cost.

***Q. Does living in supportive housing change the volume of Medicaid services residents use?***

***A. While there was a slight increase in the volume of Medicaid services used from pre- to post-supportive housing, there was a shift in type of services used from more expensive, intensive services to less expensive, preventive services.***

- Medicaid-reimbursed **inpatient psychiatric care** users decreased almost 20 percent and use decreased over 66 percent from pre- to post-supportive housing.
- **Nursing home** use decreased 97 percent.
- As expected, use of health stabilizing services such as **pharmacy**, **home health care,** and **dental care** increased.
- Although Medicaid-funded **inpatient medical care** and **outpatient psychiatric care** use increased post-supportive housing, the large increase was concentrated during the first 6 months after the supportive housing intervention. After those 6 months of stabilization, the use of inpatient care reduced dramatically. As one study reports, this increase can likely be attributed to increased contact with case managers and other professionals who can identify health concerns.[13]
- While use of Medicaid-funded **outpatient medical care** increased 26 percent during the post-supportive housing time period, there was virtually no cost increase.
- **Dental care** use increased in the first year after the supportive housing intervention then declined in the second year.

***Q. Does living in supportive housing change the type of Medicaid services residents use?***

***A. Yes. There was a shift from using Inpatient/Acute Medicaid services prior to supportive housing to relying more on Outpatient/Preventive Medicaid services after the supportive housing intervention. See Table 4.***

- The use of Inpatient/Acute Medicaid services decreased 82 percent, while the use of Outpatient/Preventive services increased 32 percent post-supportive housing.

[13] Pollio, D., Spitznagel, E., North, C., Thompson, S., & Foster, D. (2000). Services use over time and achievement of stable housing in a mentally ill homeless population. *Psychiatric Services, 51*(12), 1536-1543.

***Q. Does living in supportive housing decrease the cumulative cost of Medicaid services residents use?***

***A. Yes, there was a cost savings of over $183,000 from pre- to post-supportive housing.***

- Before supportive housing, the sample of 177 residents used a total of $1,422,399 worth of Medicaid-reimbursed health services. After the supportive housing intervention, the group used $1,240,128 worth of services.
- Overall, the cost of Inpatient/Acute services decreased 38 percent from pre- to post-supportive housing, while the cost of Outpatient/Preventive services increased only 12 percent.

**Table 3: Medicaid-Reimbursed Service Use Percent Change Over Time**

| | ***Percent Change from Pre- to Post-Supportive Housing Pre: N=84, Post: N=102*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| Inpatient medical care | 40% | 40% | 0% | 52% ($115,645) | 8% |
| Inpatient psychiatric care | -19% | -66% | -58% | -68% (-$155,896) | -60% |
| Nursing home | -70% | -97% | -91% | -97% (-$230,064) | -91% |
| Ambulance | 14% | 82% | 59% | 105% ($3,701) | 79% |
| Pharmacy | 21% | 34% | 10% | 17% ($38,184) | -3% |
| Home health care and medical equipment | 85% | 234% | 81% | 100% ($35,190) | 8% |
| Outpatient medical care | 22% | 26% | 3% | 0% ($191) | -18% |
| Outpatient psychiatric care | 15% | 61% | 40% | 15% ($32,824) | -0% |
| Physician care | 12% | -17% | -26% | -26% (-$21,899) | -34% |
| Care by other providers | -6% | -24% | -19% | -41% (-$2,767) | -37% |
| Dental care | 35% | 50% | 11% | 40% ($1,620) | 4% |

**Table 4: Category Use Percent Change Over Time**

| | *Percent Change from Pre- to Post-Supportive Housing* | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| Inpatient/Acute | 20% | -82% | -85% | -38% (-$266,614) | -49% |
| Outpatient/Preventive | 23% | 32% | 8% | 12% ($83,343) | -9% |

While there were increases in the cost of post-supportive housing Medicaid-reimbursed services, those increases were largely the result of a minority of users utilizing particularly intensive resources. Roughly one quarter (23 percent) of the people who used **ambulance services** in their post-supportive housing time period accounted for the majority (86 percent) of the total cost in this category. Almost 90 percent of users of **inpatient psychiatric care** pre-supportive housing decreased their amount of overnight stays post-supportive housing.

Of the people who used **inpatient medical care** both pre- and post-supportive housing, 75 percent increased their total **inpatient medical care** cost from pre-to post-supportive housing. Nearly one fourth (23 percent) of the people who used **inpatient medical care** during their post-supportive housing time period made up the vast majority (72 percent) of the total overnight stays. The other 77 percent of those who used **inpatient medical care** were relatively low users.

***Dolores***
Dolores struggles with high blood pressure, bone-decalcification, and a thyroid problem. She had her own apartment but because the landlord didn't keep the heat on high enough, she temporarily moved out for her health. Unfortunately, while she was gone her apartment was broken into and many things were stolen. Concerned about her health and safety, she temporarily moved in with her aunt and mother, and then bounced around to houses of different family members. Dolores was homeless, with no stable place to stay, until she entered supportive housing, where she has been living for 3 years.

Dolores says supportive housing made her realize "she was worthy" and says that "mentally, it has helped me to know that I do have a purpose." She says, "it is an awesome feeling to know you have your own key. You can be an adult again. I am independent, able, and responsible."
Before supportive housing she had no insurance but was dealing with "blood pressure that was out of control." She ended up in the emergency room three to four times a year. Now that she is in supportive housing she has less stress so her blood pressure is down, and when she has a health problem she goes to the doctor before it escalates and is forced to go to the emergency room. "I don't have to go to the ER anymore."

## Uncompensated Hospital Services
### *Local Hospitals*

Out of the 177 residents in the sample, 37 people used uncompensated hospital services pre-supportive housing, and 47 people used uncompensated hospital services post-supportive housing. Residents used 25 various hospitals around the state. See Table 5 for percent change for each service from pre- to post-supportive housing. Appendix D includes the full data for uncompensated hospital service utilization and cost.

***Q. Does living in supportive housing change the volume of uncompensated hospital services residents use?***

***A. Yes.***

- **Emergency room** total use decreased over 40 percent.
- Use of **inpatient medical care** went down 83 percent.
- **Outpatient medical care** and the **emergency room** were the most commonly used services pre-supportive housing. **Outpatient medical care** and **inpatient psychiatric care** were the most commonly used services post-supportive housing.
- **Outpatient medical care** and **outpatient psychiatric care** use remained almost the same from pre- to post-supportive housing.

***Q. Does living in supportive housing change the type of uncompensated hospital services residents use?***

***A. Yes, the number of uses of Inpatient/Acute uncompensated hospital services declined 17 percent; however, the number of uses of Outpatient/Preventative uncompensated hospital services remained the same. See Table 6.***

***Q. Does living in supportive housing decrease the cumulative cost of uncompensated hospital services residents use?***

***A. Yes, there was a total cost savings of $27,968 from pre- to post-supportive housing.***

- Before supportive housing, the sample of 177 residents used $133,429 worth of uncompensated hospital services. After the supportive housing intervention, they used $105,461 worth of services.
- There was a 25 percent cost decrease from pre- to post-supportive housing in Inpatient/Acute services and a 9 percent cost decrease from pre- to post-supportive housing in Outpatient/Preventive services.

**Table 5: Uncompensated Hospital Service Use Percent Change Over Time**

| | *Percent Change from Pre- to Post-Supportive Housing Pre: N=37, Post: N=47* | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| Inpatient medical care | -43% | -83% | -70% | -76% (-$51,552) | -58% |
| Inpatient psychiatric care | 133% | 136% | 1% | 129% ($31,274) | -2% |
| Emergency room | -13% | -43% | -34% | -46%. (-$5,139) | -38% |
| Outpatient medical care | 0% | -2% | -2% | -9% (-$2,516) | -9% |
| Outpatient psychiatric care | 100% | 0% | -50% | -4% (-$34) | -52% |
| Outpatient care: Unknown type | 0% | 5% | 5% | - | - |

**Table 6: Category Use Percent Change Over Time**

| | *Percent Change from Pre- to Post-Supportive Housing* | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| Inpatient/Acute | 3% | -17% | -20% | -25% (-$25,417) | -27% |
| Outpatient/Preventive | 0% | 0% | 0% | -9% (-$2,551) | -9% |

Although there was a large increase in the number of **inpatient psychiatric care** uses, it was primarily the result of one person who accounted for 59 percent of those overnight stays. This person self-reported that they suffered from schizophrenia and had alcohol and drug use issues. The other users of **inpatient psychiatric care** stayed only between 2 and 10 nights in their post-supportive housing period.

***Laura***

Laura lost her job in April of 2005, and her housing situation grew increasingly unstable. Most places required that she had a job, which was frustrating since she was homeless due to a job loss. Laura said, "it was very difficult to find housing. I estimate that I submitted over 50 [job] applications." At one point she lived in a car for 2 ½ weeks with her two daughters. They then lived with a friend for 2 weeks before going to an emergency transitional shelter. She stayed in the shelter a little over 90 days. During the episode of homelessness, Laura used the ER as a cooling shelter but also took her daughters to the ER when they got sick due to a lack of a primary care doctor.

The shelter helped Laura and her daughters find permanent supportive housing in Marion, Illinois. Now, both her daughters are on Medicaid and she has insurance as well. She has lost weight and feels good. Since entering supportive housing Laura has become employed again. She has also benefited from the financial literacy classes offered at the housing site and has learned a lot about her finances. She says she specifically learned the dangers of payday lending and loan sharks. Laura has also benefited from meetings focused on different topics such as how to access services like energy and childcare assistance.

## State Mental Health Hospital Use
### *Illinois Department of Human Services, Division of Mental Health*

Ten out of the 177 residents in the sample used a state mental health hospital in the pre-supportive housing time period and only one person used a state mental health hospital post-supportive housing. See Table 7 for percent change for each service from pre- to post-supportive housing. Appendix E includes the full data for state mental health hospital service utilization and cost.

***Q. Does living in supportive housing change the volume of mental health hospitalizations residents use?***

***A. Yes, there was a significant decline in mental health hospitalizations.***

- The number of users and uses of mental health hospitals decreased 90 percent from pre- to post-supportive housing.
- Overnight stays in mental health hospitals ranged from 1 to 415 during the pre-supportive housing time period. During the post-supportive housing time period, just one person stayed in a mental health hospital for 2 nights.
- The number of overnight stays in mental health hospitals went down almost 100 percent.

***Q. Does living in supportive housing change the type of mental health services residents use?***

***A. Yes.***

- Mental health hospital care is considered an Inpatient/Acute service. There was a drastic reduction in this type of care.
- None of the 11 residents who used state mental health hospitals in their pre-supportive housing time period used them in their post-supportive housing time period. Five of the 11 used Medicaid-reimbursed outpatient psychiatric care in their post-supportive housing time period.

***Q. Does living in supportive housing decrease the cumulative cost of mental health hospitalizations?***

***A. Yes, there was almost a $400,000 cost savings in mental health hospitalizations from pre- to post-supportive housing.***

- The sample of 177 residents used $400,872 worth of state mental health hospital services before the supportive housing intervention and only $873 after the supportive housing intervention.

**Table 7: Mental Health Hospital Use Percent Change Over Time**

| | *Percent Change from Pre- to Post-Supportive Housing Pre: N=10, Post: N=1* | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| Inpatient mental health hospital care | -90% | -100% | -98% | -100% (-$399,999) | -98% |

Only one person used a state mental health hospital during the post-supportive time period and it was only for 2 nights. This person reported that they suffered from depression.

***Sarah***

Sarah has been living in supportive housing for 5 years. Prior to supportive housing she had a great job at a high-ranking bank, but when they downsized she lost her job. In addition, she lost the worth of her 401(k) and had to live with her brother for a while because it was difficult to pay her bills. She then entered supportive housing. She says, "People who are in need of supportive housing are from all walks of life." Homelessness hits everyone from "Main Street to Wall Street." Supportive housing has allowed Sarah "breathing room to retrain yourself how to live." Sarah expresses that supportive housing is a "great place" and a "Godsend because we need to end homelessness." Since entering supportive housing, Sarah became covered by Medicare and is awaiting public aid medical benefits. She is seeing a psychiatrist once a month for mental health counseling and has visited the doctor for asthma.

## Substance Use Treatment Use
### *Illinois Department Human Services, Division of Alcohol and Substance Abuse*

There were 48 users of substance use treatment services pre-supportive housing and 44 users of substance use treatment post-supportive housing. See Table 8 for percent change for each service from pre- to post-supportive housing. Appendix F includes the full data for substance use treatment service utilization.

***Q. Does living in supportive housing change the volume of substance use treatment services residents use?***

***A. While the number of uses were not available for substance use treatment services, based on declines in users of all services except case management and toxicology, it can be assumed there was a decrease in the volume of substance use treatment services used.***

***Q. Does living in supportive housing change the type of substance use treatment services residents use?***

***A. Yes. See Table 9.***

- From pre- to post-supportive housing, the number of users of Inpatient/Acute services decreased 60 percent, while users of Outpatient/Preventive services increased 11 percent.

***Q. Does living in supportive housing decrease the cumulative cost of substance use treatment services residents use?***

***A. While cost data were not available for substance use treatment services, based on declines in the number of users of the most intensive services, it can be assumed that there was a significant cost decline.***

- Expensive overnight services such as **halfway houses** and **recovery homes** decreased 100 percent from pre- to post-supportive housing.

**Table 8: Substance Use Treatment Service Use Percent Change Over Time**

| | ***Percent Change from Pre- to Post-Supportive Housing Pre: N=48, Post: N=44*** |
|---|---|
| | **Number of Users** |
| Residential rehabilitation | -50% |
| Halfway house | -100% |
| Recovery home | -100% |
| Outpatient treatment | -47% |
| Detoxification | -55% |
| Case management | 60% |
| Toxicology | 150% |

**Table 9: Category Use Percent Change Over Time**

| | ***Percent Change from Pre- to Post-Supportive Housing*** |
|---|---|
| | **Number of Users** |
| Inpatient/Acute | -60% |
| Outpatient/Preventive | 11% |

***Carolyn***

Carolyn has chronic health conditions including epilepsy, asthma, and congestive heart failure, as well as a history of drug use. Prior to moving into supportive housing 2 years ago, her housing situation was unstable and changed frequently as a result of her poor health and drug addiction. She was in jail once and lost the house she owned due to her addiction. Without a place to stay, she moved in with a male friend who ended up verbally abusing her, causing her to seek safety temporarily at an uncle's place.

Carolyn realized she needed a change and entered a substance use treatment program for a 14-day detoxification program. After successfully completing detoxification, Carolyn went to another substance use treatment program for 3 months of inpatient treatment, followed by a recovery home for 6 months. It was at the recovery home that she learned about supportive housing. Now that she is in supportive housing, Carolyn attends regular Alcoholics Anonymous meetings and has remained clean and sober. Though she still struggles with her chronic health issues, the frequency of her epilepsy episodes has decreased. In addition, she can breathe and walk better now that she is in a stable environment. She has not returned to jail since her entry into supportive housing.

## State Prisons
### *Illinois Department of Corrections*

Eleven of the 177 residents spent time in state prisons pre-supportive housing and no residents spent time in state prisons post-supportive housing. See Table 10 for percent change from pre- to post-supportive housing. Appendix G includes the full data for time in state prison and cost.

***Q. Does living in supportive housing change the amount of time spent in state prison?***

***A. Yes, there was a 100 percent decrease in time spent in state prison from pre- to post-supportive housing.***

- Overnight stays in prison ranged from 2 to 328 during the pre-supportive housing period, dropping to zero during the post-supportive housing time period.

***Q. Does living in supportive housing decrease the cumulative cost of time in state prison?***

***A. Yes, there was a cost savings of over $215,000 from pre- to post-supportive housing.***

- Before supportive housing, the time the sample of 177 residents spent in state prison cost $215,759. After the supportive housing intervention, residents did not spend any time in prisons; therefore, there was a **100 percent cost savings**.

**Table 10: Time in State Prison Percent Change Over Time**

| | ***Percent Change from Pre- to Post-Supportive Housing Pre: N=11, Post: N=0*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| State prison | -100% | -100% | -100% | -100% (-$215,759) | -100% |

***Vernice***

Vernice was living in apartments that she considered "the projects." She has a disability which limits her ability to work, and she receives disability assistance to help pay bills. For years she struggled with an addiction to crack and alcohol and was in an abusive relationship. She ended up in county jails three times for theft and battery with her stays lasting a couple of days each time. Then Vernice was sentenced to time in a state prison for 3 ½ years. When she was released from prison she had nowhere to live and entered a shelter in Carbondale, Illinois. There she learned about a halfway house that could help her with her drug addiction. She was at the halfway house for approximately 3 months before she had contact with the Southern Illinois Coalition for the Homeless, who helped her get into supportive housing. She now pays 30 percent of her income for rent and pays all the bills herself.

She has been clean and sober since 2003. She has Medicaid insurance for her child which now allows her to use the family doctor more than the emergency room, which she only uses for true emergencies. Now that she is in supportive housing she has a case manager who helps her locate resources and makes sure she is doing well. She also attends meetings once every other month on various topics. Vernice appreciates that her rent is a percentage of her income, especially since her income is limited. Supportive housing has allowed her to have better health and leave an abusive situation with her former husband.

## County Jails

Nine of the 177 residents spent time in county jail pre-supportive housing and four residents spent time in county jails post-supportive housing. Residents utilized four different county jails around Illinois: Cook, McLean, Winnebago, and DuPage County Jails. See Table 11 for percent change from pre- to post-supportive housing. Appendix H includes the full data for time in county jails and cost.

***Q. Does living in supportive housing change the amount of time spent in county jails?***

***A. Yes, there was a significant decrease in the time spent in county jails.***

- The number of overnight stays decreased 86 percent from pre- to post-supportive housing.
- The length of stay in county jails ranged from 0 to 200 overnight stays during the pre-supportive housing period and from 4 to 23 overnight stays during the post-supportive housing period—a significant reduction.

***Q. Does living in supportive housing decrease the cumulative cost of time spent in county jails?***

***A. Yes, there was a cost savings of over $27,000 from pre- to post-supportive housing.***

- Before supportive housing, the sample spent time in county jails costing $32,099. After the supportive housing intervention, this sample spent time costing $4,618.

**Table 11: Time in County Jail Percent Change Over Time**

| | ***Percent Change from Pre- to Post-Supportive Housing Pre: N=9, Post: N=4*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| County jail | -56% | -86% | -67% | -86% (-$27,481) | -68% |

Of the four residents who spent time in county jail during their 2 years after the supportive housing intervention, two of them reported having a mental illness, three reported having abused alcohol, and all of them reported abusing drugs and not being employed at the time of study enrollment. Three out of the four utilized substance use treatment.

***Herman***
Herman used crack and marijuana for 15 years, eventually becoming homeless. He also struggled with bronchial asthma and hearing problems. Since he was uninsured he regularly used the emergency room for medical care. While homeless he sometimes stayed at friends, sometimes slept on the el train, and other times slept in hallways of buildings. He also stayed at two shelters both for about 18 months and spent about 30 days in county jail. At the shelter the employees helped him through his addiction and helped reconnect him with his faith by teaching him that "God has sustained me."

Herman has lived in supportive housing for 8 years. He has health insurance and goes to a primary care physician instead of the emergency room. Though his health problems remain, they are not as bad and episodes not as frequent. He has health and wellness checkups every 6 months at his supportive housing site. He says that supportive housing "gives people an opportunity to have a place of their own. By having a place of my own it gave me the opportunity to go to school and have a place to go when you come out of school." He is now a front desk worker and is on the tenant council.

# Results: Cross System Analysis

## Change in the Type of Services Used Over Time

There was a dramatic shift in the type of services used across all six systems (see Table 12). The majority of services used shifted from Inpatient/Acute and Incarceration before supportive housing, to Outpatient/Preventive after the supportive housing intervention.

- There was a 77 percent decrease in the number of nights spent in Incarceration and an 83 percent decrease in the number of uses of Inpatient/Acute services after the supportive housing intervention.
- These decreases in use correspond with a large decrease in the total cost. The total cost of Incarceration decreased 98 percent and Inpatient/Acute services decreased 58 percent in total cost.
- While Outpatient/Preventive service use increased 32 percent, there was only a corresponding 11 percent total cost increase from pre- to post-supportive housing.

**Table 12: Service Type Change Over Time[14]**

| | ***Percent Change from Pre- to Post-Supportive Housing*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Uses per User** | **Total Cost** | **Average Cost per User** |
| Inpatient/Acute (not including substance use) | -0% | -83% | -83% | -58% (-$692,030) | -58% |
| Outpatient/Preventive | 13% | 32% | 17% | 11% ($80,793) | -2% |
| Incarceration | -77% | -98% | -91% | -98% (-$243,240) | -92% |

## Cost Savings

In the 2 years before the supportive housing intervention, the 177 residents used $2,204,557 worth of services. In the 2 years after entry into supportive housing, these 177 residents used a total of $1,350,081 worth of services. Post-supportive housing costs declined the longer residents lived in supportive housing (see Table 13). Thirty percent of the total cost was accrued in months 1 through 6, declining to 21 percent in months 19 through 24 of the 2-year post-time period. This illustrates that fewer costs were accrued by residents as time in supportive housing increased and that cost reduction may likely continue beyond this study's time frame, resulting in even greater cost savings for long-term supportive housing residents.

[14] Substance use treatment services are not included in this analysis due to missing data on uses and total cost.

**Table 13: Post-Supportive Housing Cost Accrual in 6 Month Increments**

| Months After Entry into Supportive Housing | Percent of Total Post-Supportive Housing Costs Accrued |
|---|---|
| 1-6 Months | 30% |
| 7-12 Months | 27% |
| 13-18 Months | 22% |
| 19-24 Months | 21% |

For these 177 residents, there was a 39 percent reduction in total cost with an overall cost savings of $854,477. This is an average cost savings of $4,828 per person from pre- to post-supportive housing for the 2-year time period across all of the systems included in this study minus substance use treatment services. This averages to $2,414 per person, per year.

Ten people in the sample can be considered high-cost users. High-cost users are those who used $50,000 or more worth of services during the 2 years before entering supportive housing. Their total cost of services in the 2 years before supportive housing ranged from $54,000 to $194,000 with a median cost of $107,000. Each of these 10 high cost users had a dramatic cost decrease from pre- to post-supportive housing. The average cost savings was $73,000 per person, with a cost savings range of $2,400 to $180,000.

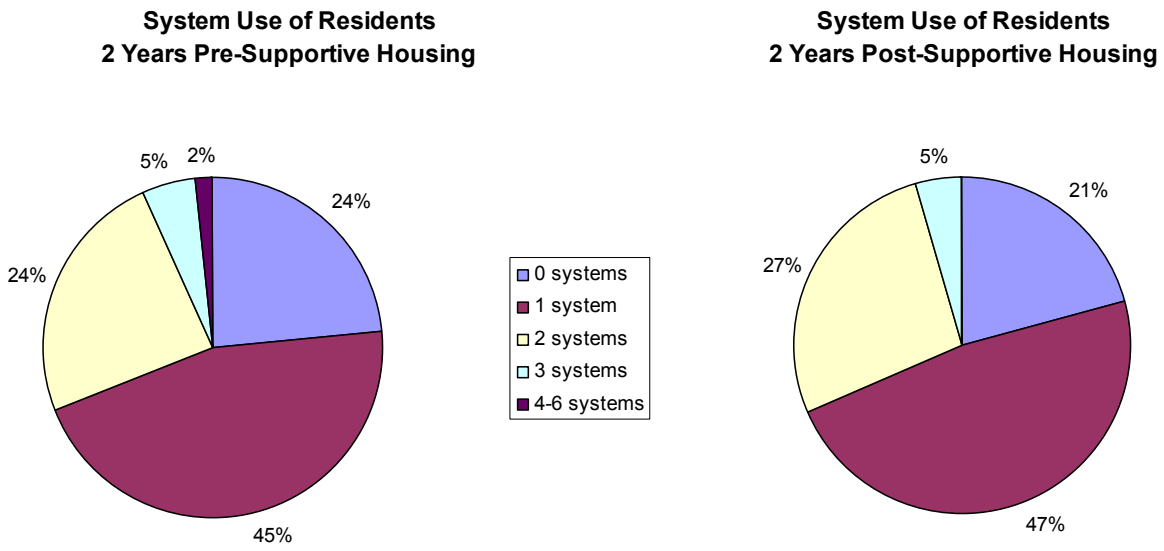
The biggest cost savings came from three systems: state mental health hospitals, state prisons, and Medicaid. The sample of 177 residents saved close to $400,000 from a decrease in state mental health hospitalizations, over $215,000 from a decrease in state prison admissions, and $183,000 from a decrease in use of Medicaid-reimbursed services.

This cost savings is a conservative estimate due to substance use treatment services and some uncompensated outpatient hospital service costs not being included in this analysis. In addition, shelter costs, police costs, soup kitchens, community health clinics, and many other services related to homelessness were not captured; therefore, the overall cost savings after the supportive housing intervention is likely much greater.

## Use of Multiple Systems

There was not a large change in the number of systems residents used from pre- to post-supportive housing. Chart 1 illustrates the percentage of residents from the sample using various numbers of systems pre- and post-supportive housing. The majority of residents used one or two systems during both their pre- and post-supportive housing time period. Twenty-eight residents used no systems before supportive housing and 32 residents used no systems after supportive housing. The majority of residents used Medicaid-reimbursed services, substance use treatment services, and uncompensated hospital services. As mentioned earlier, there was a shift over time within each of these three systems from use of Inpatient/Acute services to use of Outpatient/Preventive services.

## Chart 1: System Use of Residents Pre- and Post-Supportive Housing



# Discussion

This is the first statewide study that looks at the effects of permanent supportive housing on residents in Illinois and adds to the current research about the cost-effectiveness of supportive housing as a key component for eliminating homelessness. Supportive housing in Illinois not only reduced the homelessness and housing instability previously experienced by residents but also produced a large cost savings in a number of public systems. Based on resident interviews, many people also experienced enhanced quality of life, not solely as result of being stably housed, but also due to their increased use of preventive and maintenance services, particularly in health, mental health, and substance use treatment service systems.

## Implications for Practice and Policy

**Supportive housing providers should give consideration to the following as they seek to enhance their services:**

- In the first 6 months of permanent supportive housing residents need support in order to stabilize their health. Some services, such as inpatient medical care, saw a spike in use in the first 6 months of supportive housing which quickly decreased thereafter. In line with findings from other supportive housing studies, use of health services increased after people were housed, likely due to increased contact with case managers who made referrals to health professionals. While homeless, many people did not have access to such systems and deferred needed care. Health and mental health needs are an important initial assessment and referral piece for case managers to consider.
- Medicaid-reimbursed services and substance use services were the most frequently used both pre- and post-supportive housing. Case managers have an opportunity to educate about and refer residents to Outpatient/Preventive services, which not only saves money, but can help residents maintain stability in their health and lives.
- Supportive housing is effective with the most expensive users of public services, such as those with a mental illness or substance users. While these groups used high-cost services before entry into supportive housing, they benefited from being housed and produced a dramatic cost savings after the supportive housing intervention.
- There are implications of this analysis for targeting supportive housing. Supportive housing has a tremendous cost savings impact for people who might be considered the hardest to house: those with a mental illness, those who were formerly incarcerated, those with a disability or health issue, and those with histories of drug use. As projects seek to target populations in need, tailoring outreach and services for those with the aforementioned characteristics will result in cost savings as well as appropriate housing in the least restrictive setting.

**Policymakers have an opportunity to prioritize people who are homeless and have barriers by housing them in supportive housing instead of in expensive, more restrictive settings:**

- People are often inappropriately housed in nursing homes due to a lack of available supportive housing options. In addition, many patients need more intensive nursing care after a medical crisis, and since nursing homes do not want to discharge people back to homelessness, they retain them longer than necessary. Nursing homes are a very expensive housing option that should be relied on only for people who need full-time care, and supportive housing should be available for those who need less intensive supports and services to remain healthy and housed.

- People with mental illness are often unnecessarily placed in Institutes for Mental Disease, which are nursing homes with over 16 beds in which the majority of residents have a mental illness. For nursing homes with this designation, the federal government will not provide Medicaid reimbursement for services provided to people age 22 to 64. The state of Illinois ends up paying an average of $160 million annually to house people in these Institutes for Mental Disease. Many of these people could live on their own in supportive housing and save the state millions of dollars a year.

**Policymakers have an opportunity to invest funds more wisely in Illinois by making permanent supportive housing available to more people in need:**

- Time spent in jails and prisons plummeted for the supportive housing residents in this study, saving tens of thousands of dollars. Supportive housing is a better investment for the person who is homeless, for the community through reduced crime, and for the state in reduced correctional outlays.
- Once in supportive housing, residents can begin to stabilize their lives. They start receiving medical treatment, stabilize their medication, and are less likely to use expensive Inpatient/Acute services such as mental health hospitals and nursing homes.
- It is challenging to document cost savings from supportive housing and to fund services for supportive housing because government funding streams for different populations are compartmentalized. Funding for supportive housing services is needed from multiple state agencies, and there needs to be a mechanism for this to happen smoothly. For example, money seen from cost savings in prisons and nursing homes after the supportive housing intervention needs to be able to easily shift to invest in supportive housing.

## Study Limitations

There are a number of limitations to this study:

1. **Missing Data:** Due to uncollected medical records this data under-represents those who used uncompensated hospital services without Medicaid coverage. Since not all residents in the study were eligible for or covered by Medicaid, residents self-reported the hospitals that they had visited during the study time period. Because is it easy to forget every past service use, it is likely services at some hospitals were not captured. Also, two counties would not release their county jail information, covering two people, and some substance use treatment records had to be deleted because of data errors. In addition, there were no cost data for substance use treatment. Please see Appendix B for more detail on data limitations within each system.
2. **Data errors:** Because complex databases were used from various state agencies there is a possibility of data error. These large databases are prone to missing data, errors in data entry, and errors in transmission of data. The implications of such errors for this study are unknown, but it is likely that because they are not systematic errors, they are not significant.
3. **Missing Costs:** The cost savings that are reported here are conservative estimates because of a series of data limitations. Due to lack of available data, many costly services are not included in this study. Excluded services include homeless shelters, community health services, homeless drop in day centers, soup kitchens, substance use treatment, and potentially other services that bear costs related to homelessness such as police contact and the cost associated with being a victim of a crime. Unlike other states where supportive housing studies have reported homeless system costs, Illinois does not have one universal statewide data system that all homeless providers use to track services; therefore, these services cannot be assigned a cost value. In addition, some prior studies were able to capture social costs of homelessness. One study in Maine quantified police contacts 1 year before supportive housing and 1 year after for 99 people enrolled in their study of supportive housing.[15] They found a 68 percent decrease in police contacts, a reduction of 115 interactions. This led to a 66 percent cost decrease in police contact for a cumulative cost savings of $15,109 for the entire study sample in 1 year. This Illinois study was not able to capture such costs; however, it can be inferred from other studies, that there would be a cost savings related to the criminal justice system.
4. **Sampling bias:** At the time of study recruitment, all 177 residents had lived in supportive housing for more than 1 year, and the average tenure in supportive housing was 3.2 years. Because residents were enrolled in the study regardless of their length of supportive housing residence, the sample in this study is skewed toward a population that has lived in supportive housing longer. These tenants may have slightly different service use patterns than those who are in supportive housing for shorter stays. For example, in another study of supportive housing residents living with mental illness conducted in Philadelphia, the average tenure for residents was 18 months, and a significant portion of residents left before 2 years of residence. The study showed that residents who remained in supportive housing longer were less likely to be frequent users of inpatient care and emergency services.[16] They typically had contact with community residential services prior to entry and once in permanent supportive housing tended to use less expensive outpatient services. This would show a smaller cost savings than people who used more Inpatient/Acute services prior to housing. Due to the Illinois study sample's

[15] Mondello, M., Gass, A., McLaughlin, T., & Shore, N. (2007). *Cost of homelessness: Cost analysis of permanent supportive housing.* Portland, OR: Corporation for Supportive Housing.
[16] Wong, Y. I., et al. (2006, March). *Predicting staying in or leaving permanent supportive housing that serves homeless people with serious mental illness*. Philadelphia: University of Pennsylvania Center for Mental Health Policy and Services Research.

longer tenure, the cost savings reported are likely to be lower than that of the overall supportive housing population.

5. **Research design:** This study utilized a convenience sample—the people enrolled in the study were volunteers from participating supportive housing sites. This lowers the ability to generalize the findings to the broader supportive housing population since it is unknown if people who enrolled differ in important ways from those who did not enroll. Additionally, establishing a control group in the form of a matched comparison group was unfeasible for this study. This limits the ability to say with certainty that the supportive housing intervention was the sole cause of changes in service use and cost.
6. **Study time frame:** This study only included data on service use and related costs in the 2 years after a person enters supportive housing. The 2 years after the supportive housing intervention is likely a period of stabilization for many residents with service use presumably higher than in subsequent years. It is important to note that in the second year of supportive housing, residents' total cost of services decreased from the first year in housing. The cost of services will likely continue to decease as more people stabilize their health and they begin a maintenance phase. Housing people in supportive housing could continue to produce long-term cost savings. Further research is needed to establish the longer-term effects of supportive housing and test the hypothesis that there will be a shift from more expensive services used to less expensive services, producing a cost savings overall.

## Conclusion

This is the first statewide study that looks at the effects of supportive housing for residents in Illinois and adds to the current research about the cost-effectiveness of supportive housing as a key component for eliminating homelessness.

Overall, there was a cost savings in every system studied from pre- to post-supportive housing. There was a 39 percent reduction in total services cost from pre- to post-supportive housing with an overall cost savings of $854,477 for the 177 residents. This was an average cost savings of $4,828 per resident from pre- to post-supportive housing for the 2-year time period or $2,414 per resident, per year.

The true cost savings realized by supportive housing is likely to be much higher than reported here. There were a number of costs that were infeasible to include or beyond the scope of this analysis, including costs incurred by the homeless system and related services, substance use treatment costs, social costs, and many others.

Importantly, residents also shifted the type of services they used—from a high reliance on expensive Inpatient/Acute services (such as inpatient care, emergency rooms, and mental health hospitals) before they entered supportive housing to less expensive Outpatient/Preventive services (such as outpatient care, home health care, and case management) after they entered supportive housing. The volume of services used decreased for expensive Inpatient/Acute services and Incarceration and increased slightly for less expensive Outpatient/Preventive services.

This study underscores the importance of prioritizing more appropriate housing options for people living in restrictive settings who could live in the community if supportive housing were available. Supportive housing can not only reduce costs of public systems particularly in the areas of nursing homes, mental health, and criminal justice, but can also dramatically improve the quality of life for thousands of Illinoisans.

# Appendix A: Characteristics of Residents Enrolled in Study

The sample of 177 residents used in the analysis is similar to the full 476 group that was initially enrolled into the study in all ways except the sample has lower percentages of people with a developmental disability and a physical disability. Compared to the 2004 provider responses, the study sample shows a higher percentage of people who have mental illness, drug abuse, alcohol abuse, chronic physical health issues, and former incarceration.

| | **2004 Illinois Supportive Housing Population** **provider report* | **476 Group Enrolled in the Study** | **177 Sample Used for Analysis** |
|---|---|---|---|
| **Number of Providers/Projects in Sample** | 118 | 31 | 26 |
| **Number of Residents in Sample** | 5,466 | 476 | 177 |
| Mental illness | 34% | 43% | 42% |
| Drug abuse | 21% | 36% | 39% |
| Alcohol abuse | 18% | 32% | 40% |
| Formerly incarcerated | 16% | 23% | 22% |
| Chronic physical health issues | 6% | 36% | 34% |
| Developmental disability | 8% | 27% | 10% |
| Physical disability | 11% | 11% | 30% |

## Appendix B: Data Sources, Definitions, and Limitations

**Medicaid-Reimbursed Services (Illinois Department of Health and Family Services)**

1. *Inpatient medical care* includes general inpatient hospital services and physical rehabilitation hospital services.
2. *Inpatient psychiatric care*
3. *Pharmacy*
4. *Home health care and medical equipment* includes medical supplies, medical equipment, in-home providers (nurses, home health aides), homemakers, electronic home response, and home health services.
5. *Outpatient medical care* includes general clinic services, general outpatient services, and medical care at clinics and hospitals.
6. *Outpatient psychiatric care* includes mental health rehab option services, mental health-targeted case management services, psychiatric clinic services, mental health option services, physician's psychiatric services, and psychologist encounters.
7. *Physician care* (care at a physician's office)
8. *Care by other providers* includes podiatric, nursing, optometric, habilitation, anesthesia, occupational therapy, physical therapy, chiropractic, physical rehabilitation, audiology, and nurse practitioner services.
9. *Dental care*
10. *Nursing home*
11. *Ambulance*

**Uncompensated Hospital Services (local hospitals)**

1. *Inpatient medical care*
2. *Inpatient psychiatric care*
3. *Outpatient medical care*
4. *Outpatient psychiatric care*
5. *Emergency room*

There were some limitations in the data for uncompensated hospital services:

- 11 medical records covering 10 people are missing from the analysis because the hospitals did not fulfill the data request.
- Seven medical records covering seven people were not released because the consent forms did not meet the hospitals' regulations for release.

**State Mental Health Hospitals (Illinois Department of Human Services, Division of Mental Health)**

1. *Inpatient state mental health hospital*

**Substance Use Treatment Services (Illinois Department of Human Services, Division of Alcohol and Substance Abuse)**

1. *Detoxification* consists of the process of withdrawing a person from a specific psychoactive substance in a safe and effective manner.
2. *Residential rehabilitation* substance use treatment consists of clinical services for adults or adolescents. The frequency and intensity of such treatment depends on patient need. A planned regimen of clinical services for a minimum of 25 hours per week must be included and requires staff to be on duty 24 hours per day, 7 days per week.
3. *Outpatient treatment* services consist of face-to-face clinical services for adults or adolescents in a non-residential setting. The frequency and intensity of such treatment depends on patient need. Outpatient services are regularly scheduled sessions that average less than 9 hours per week.
4. *Case management* services consist of a range of funded activities designed to augment clinical services for an admitted treatment patient. Substance use case management provides, coordinates, or arranges ancillary services designed to support a specific patient's substance use treatment with the goal of improving clinical outcomes.
5. *Halfway house* services are for adults or adolescents and are provided by professional staff in a 24-hour structured and supervised treatment environment. This type of service is primarily designed to provide residents with a safe and stable living environment in order to develop sufficient recovery skills.
6. *Recovery homes* are alcohol and drug-free housing. The goal of recovery homes is to provide an environment for maintenance of sobriety for persons in early recovery from substance use, for those who have recently completed substance use treatment services, or for those who may be receiving such treatment services at another licensed facility.
7. *Toxicology* services report the number of urine screens administered to a patient.

There were some limitations in the data for substance use treatment:

- Records for 10 people had to be discarded from the Division of Alcohol and Substance Abuse (DASA) dataset because the "service begin" and "service end" dates were reported incorrectly by DASA.
- These data also do not include 24 entries from the Medicaid dataset of Medicaid-reimbursed alcohol and substance use services that did not appear in the DASA dataset. These 24 entries were unusable because there was no detail on the type of substance use treatment received.
- No valid cost data were available to researchers for DASA services. Substance use treatment and related services accounted for a large amount of services, and therefore, a large amount of unreported costs.

**Illinois State Prisons (Illinois Department of Corrections)**

1. *Overnight stays in State Prisons*

**County Jails (Various Illinois County Jails)**

1. *Overnight stays in County Jails*

There were some limitations in the data for county jails:

- Two counties would not release jail history records. This affects data for two residents.

# Appendix C: Medicaid-Reimbursed Service Use

"Uses" for inpatient medical care, inpatient psychiatric care, and nursing homes are a count of overnight stays in a facility.

| | Pre: N=84<br>Post: N=102 | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Use per User** | **Total Cost** | **Average Cost per User** |
| **PRE-SUPPORTIVE HOUSING** | | | | | |
| Inpatient medical care | 25 | 193 | 8 | $224,547 | $8,982 |
| Inpatient psychiatric care | 16 | 476 | 30 | $230,119 | $14,382 |
| Pharmacy | 76 | 2,847 | 37 | $220,592 | $2,903 |
| Home health care and medical equipment | 13 | 120 | 9 | $35,253 | $2,712 |
| Outpatient medical care | 68 | 564 | 8 | $151,210 | $2,224 |
| Outpatient psychiatric care | 40 | 4,300 | 108 | $224,225 | $5,606 |
| Physician care | 75 | 2,834 | 38 | $85,477 | $1,140 |
| Care by other providers | 33 | 110 | 3 | $6,770 | $205 |
| Dental care | 23 | 64 | 3 | $4,099 | $178 |
| Nursing home | 10 | 2754 | 275 | $236,576 | $23,658 |
| Ambulance | 21 | 60 | 3 | $3,531 | $168 |
| **POST-SUPPORTIVE HOUSING** | | | | | |
| Inpatient medical care | 35 | 271 | 8 | $340,192 | $9,720 |
| Inpatient psychiatric care | 13 | 161 | 12 | $74,223 | $5,709 |
| Pharmacy | 92 | 3,803 | 41 | $258,776 | $2,813 |
| Home health care and medical equipment | 24 | 401 | 17 | $70,443 | $2,935 |
| Outpatient medical care | 83 | 711 | 9 | $151,401 | $1,824 |
| Outpatient psychiatric care | 46 | 6,908 | 150 | $257,050 | $5,588 |
| Physician care | 84 | 2,353 | 28 | $63,578 | $757 |
| Care by other providers | 31 | 84 | 3 | $4,003 | $129 |
| Dental care | 31 | 96 | 3 | $5,719 | $184 |
| Nursing home | 3 | 72 | 24 | $6,512 | $2,171 |
| Ambulance | 24 | 109 | 5 | $7,232 | $301 |

## Appendix D: Uncompensated Hospital Service Use

"Uses" for inpatient medical care and inpatient psychiatric care are a count of overnight stays in a facility.

| | ***Pre: N=37 Post: N=47*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Use per User** | **Total Cost** | **Average Cost per User** |
| **PRE-SUPPORTIVE HOUSING** | | | | | |
| Inpatient medical care | 7 | 53 | 8 | $68,097 | $9,728 |
| Inpatient psychiatric care | 3 | 39 | 13 | $24,245 | $8,082 |
| Outpatient medical care | 21 | 105 | 5 | $28,976 | $1,380 |
| Outpatient psychiatric care | 2 | 10 | 5 | $894 | $447 |
| Outpatient care: Unknown type | 14 | 42 | 3 | - | - |
| Emergency room | 31 | 96 | 3 | $11,217 | $362 |
| **POST-SUPPORTIVE HOUSING** | | | | | |
| Inpatient medical care | 4 | 9 | 2 | $16,545 | $4,136 |
| Inpatient psychiatric care | 7 | 92 | 13 | $55,519 | $7,931 |
| Outpatient medical care | 21 | 103 | 5 | $26,460 | $1,260 |
| Outpatient psychiatric care | 4 | 10 | 3 | $859 | $215 |
| Outpatient care: Unknown type | 14 | 44 | 3 | - | - |
| Emergency room | 27 | 55 | 2 | $6,078 | $225 |

## Appendix E: Mental Health Hospital Use

"Uses" are a count of overnight stays in a facility.

| | ***Pre: N=10 Post: N=1*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Use per User** | **Total Cost** | **Average Cost per User** |
| **PRE-SUPPORTIVE HOUSING** | | | | | |
| Inpatient mental health hospital care | 10 | 888 | 89 | $400,872 | $40,087 |
| **POST-SUPPORTIVE HOUSING** | | | | | |
| Inpatient mental health hospital care | 1 | 2 | 2 | $873 | $873 |

## Appendix F: Substance Use Treatment Service Use

*Please note that due to lack of data, only "users" are noted here.

| | ***Pre: N=48 Post: N=44*** |
|---|---|
| | **Number of Users** |
| **PRE-SUPPORTIVE HOUSING** | |
| Outpatient treatment | 38 |
| Detoxification | 20 |
| Case management | 25 |
| Residential rehabilitation | 16 |
| Halfway house | 1 |
| Recovery home | 1 |
| Toxicology | 2 |
| **POST-SUPPORTIVE HOUSING** | |
| Outpatient treatment | 20 |
| Detoxification | 9 |
| Case management | 40 |
| Residential rehabilitation | 8 |
| Halfway house | 0 |
| Recovery home | 0 |
| Toxicology | 5 |

## Appendix G: Time in State Prison

"Uses" are a count of overnight stays in a facility.

| | ***Pre: N=11 Post: N=0*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Use per User** | **Total Cost** | **Average Cost per User** |
| **PRE-SUPPORTIVE HOUSING** | | | | | |
| State prison | 11 | 3,020 | 89 | $ 215,759 | $19,614 |
| **POST-SUPPORTIVE HOUSING** | | | | | |
| State prison | 0 | 0 | 0 | 0 | 0 |

## Appendix H: Time in County Jails

"Uses" are a count of overnight stays in a facility.

| | ***Pre: N=9 Post: N=4*** | | | | |
|---|---|---|---|---|---|
| | **Number of Users** | **Number of Uses** | **Average Use per User** | **Total Cost** | **Average Cost per User** |
| **PRE-SUPPORTIVE HOUSING** | | | | | |
| County jail | 9 | 532 | 59 | $32,099 | $3,567 |
| **POST-SUPPORTIVE HOUSING** | | | | | |
| County jail | 4 | 77 | 19 | $4,618 | $1,155 |

# Appendix I: High-Cost User Characteristics

| Residents Identifying With: | Percent of Sample |
|---|---|
| Mental illness | 70% |
| History of drug related problems/issues | 40% |
| Chronic physical health problems | 40% |
| History of alcohol-related problems | 20% |
| Physical disability | 50% |
| Formerly incarcerated | 20% |
| Victim of domestic violence | 0% |
| Developmentally disabled | 20% |
| Veteran | 10% |
| Living with HIV/AIDS | 10% |

| Income Source | Percent of Sample |
|---|---|
| ***Non-cash Assistance*** | |
| Food Stamps | 50% |
| Medicaid | 70% |
| Medicare | 20% |
| Child support | 0% |
| ***Cash Assistance*** | |
| Supplemental Security Income (SSI) | 90% |
| Employment income | 10% |
| Social Security Disability Insurance (SSDI) | 20% |
| General Public Assistance | 20% |
| Social Security | 0% |
| Veteran's Benefits | 0% |
| Temporary Assistance for Needy Families (TANF) | 0% |
| Unemployment benefits | 0% |

| Age (Years) | Percent of Sample |
|---|---|
| 20-30 | 10% |
| 31-40 | 20% |
| 41-50 | 50% |
| 51-60 | 20% |

| Length of Residency in Supportive Housing (Months) | Percent of Sample |
|---|---|
| 0-24 | 10% |
| 25-36 | 50% |
| 37-48 | 20% |
| 49-60 | 20% |