SUPPORTED HOUSING: REVIEW OF EVIDENCE

Brief description of the practice

Decent, safe, affordable and integrated housing is a basic aspect of recovery for persons with psychiatric disabilities. This review summarizes the extent to which supported housing approaches have been shown to contribute to this goal.

The terms “supported housing” and “supportive housing” are used inconsistently and with considerable imprecision and overlaps. Below is an attempt to arrive at a central meaning for each, as used in this review of evidence.

Supported housing is a program model in which a consumer lives independently (in a house, apartment or similar setting, alone or with others in landlord controlled housing), and has considerable responsibility for choosing and maintaining the housing while receiving support from mental health staff in monitoring and assisting with residential responsibilities. Lipton defines it as “permanent independent housing with flexible individualized services and supports that are integrated into the community and chosen by the consumer.” It is sometimes termed a “housing as housing” approach because it developed as a consumer driven reaction against the residential continuum concept in which treatment and housing are linked. Supported housing advocates view independent housing as a right rather than something to be earned by compliance with treatment.

Supportive housing applies to efforts to increase the stock of affordable permanent housing for persons with disabilities. The Corporation for Supportive Housing (CSH) is a federal funded agency endorsing and supporting this approach. This approach is also a component of California’s Mental Health Services Act and was endorsed by the President’s New Freedom Commission. The CSH definition permits a variety of settings but each tenant has his or her own lease and the housing is “permanent” rather than “transitional.” This range of housing is sometimes termed integrated housing development to emphasize that the housing units are usually added to existing stock by rehabilitating buildings and that a diverse set of tenants is recruited, with services frequently available on site. Integrated housing developments are designed for persons who are homeless or at risk of becoming homeless. In Los Angeles, for example, the Skid Row Housing Trust rehabilitates old hotels and works collaboratively with other agencies to provide services to its tenants. In New York City, 3,048 new individual housing units were built and occupied by formerly homeless persons between 1990 and 1997. Hopper and Barrow trace the separate genealogies of the supported housing and integrated housing development approaches. Major differences are highlighted in Table 1 on the next page.
Table 1: Practice components of supported and supportive housing (adapted from Hopper and Barrow):  

<table>
<thead>
<tr>
<th>Supported housing (housing as housing)</th>
<th>Supportive housing (integrated development)</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Normalized housing in conventional units</td>
<td>▪ Adds new units or rehabs old units to increase stock of affordable housing</td>
</tr>
<tr>
<td>▪ Separates housing from mental health service provision</td>
<td>▪ Makes services available on site</td>
</tr>
<tr>
<td>▪ Leverages tenant access to scatter-site apartments</td>
<td>▪ Uses multi-unit buildings housing diverse constituencies</td>
</tr>
<tr>
<td>▪ Maximizes consumer choice and focuses on informal social networks and family</td>
<td>▪ Builds tenant involvement within the housing site and community in the neighborhood</td>
</tr>
<tr>
<td>▪ Promotes individual unit affordability through rental assistance and warranties; tenants agree to pay 30% of income per month for housing</td>
<td>▪ Develops project-level funding for housing through multiple funding streams and mixed use</td>
</tr>
<tr>
<td>▪ Funds are spent on rental vouchers and support</td>
<td>▪ Funds include housing development as well as rental vouchers and support</td>
</tr>
</tbody>
</table>

Despite these differences, supported housing and integrated housing development have several elements in common:  

- Housing choice: Clients have opportunities and assistance in exploring a range of housing options/preferences, including choice of who to live with, and furnishings.
- Housing and services roles are distinct: Housing (and/or housing subsidies) and support services are provided by separate entities. Participation in any type of services is not usually a condition of tenancy.
- Housing affordability: Tenants receive assistance in obtaining and maintaining eligibility for subsidies (such as Section 8 vouchers) that help cover rent costs if needed.
- Integration: Housing is (usually) in buildings that include a mix of people with and without a diagnosis of mental illness.
- Tenancy rights / permanent housing: Individuals can keep their housing as long as they pay the rent and don’t violate terms of a lease or rental agreement. They control their unit, are responsible for paying rent, and hold the lease in their own name.
- Services are recovery-oriented and adapted to the needs of individuals: In particular, clients can accept or refuse treatment and support services without losing their housing. Services are flexible and may change over time.

*Housing first* is a supportive housing approach for homeless persons in which individual housing is offered without pre-requisites, such as sobriety or receipt of psychiatric medications. The very successful Pathways to Housing in NYC uses the approach with ACT teams serving scatter site
housing but it is also used in integrated housing developments. CSH refers to this model as “low demand” housing.

**Mixed integrated housing.** Another newer approach focuses on rehabilitating buildings and offering affordable housing to a mix of formerly homeless persons and low income workers. Common Ground has created more than 2,000 units of permanent and transitional housing near NYC and recently received funding for 1000 such units in NYC.

To complicate matters, the term "supportive housing” is sometimes used very broadly, often encompassing the entire residential continuum. In New York City, for example, where several major studies were conducted, the term has been applied to transitional housing, or congregate living situations where meals are provided, as well as to buildings in which tenants have their own apartment but all residents are mentally ill, and to more independent settings. The staff may be housed on site as opposed to off-site. In California, programs in the Community Residential Treatment System continuum may be considered supportive housing in this broad sense and even board and care programs would fit some definitions.

We will use the following terminology:

- **Housing as housing = supported housing**
- **Developing and staffing new housing units for homeless persons or those at risk of homelessness= integrated housing development**
- **Placing persons as tenants in integrated housing developments without sobriety or treatment prerequisites= Housing First**
- **Broad range of less intense to intensive residential settings for persons who are homeless = supportive housing**

In this review, the primary focus is supported housing. We attempt to clarify the nature of the housing and support included in each study, but there are many overlaps in practice between what seem initially to be conceptually distinct models.8

**Target group:**

Supported housing is intended to aid persons with psychiatric disabilities who would otherwise have difficulty accessing or maintaining independent living situations. Integrated housing developments are typically targeted at chronically homeless individuals but the Housing First model of supported housing also targets homeless persons.

**Measures of effectiveness:**

The primary measure is housing stability, but other objective factors have been studied including hospitalizations, improved social skills, broader social networks, more community participation, reduced symptoms, neurocognitive functioning, higher quality housing, and cost savings. Qualitative outcomes include quality of life, perceptions of choice, empowerment. A key question is what control group is relevant for scatter site supported housing. It has been
compared to persons living in shelters or homeless, to persons living in a continuum of residential programs, and to integrated housing development. Thus there is potentially a bewildering array of possible outcomes and comparisons.

**Evidence supporting Supported Housing**

Systematic reviews

A. The Cochrane Review undertook a meta-analysis of randomized controlled trials of either supported or supportive housing in 2001, but reviewers were unable to find studies that met their criteria. 

B. Rog reviewed the literature in 2004 using criteria for strength of evidence established by the Texas Department of Mental Health. In Appendix I we show her table summarizing the studies and major outcomes of each study. Her conclusions are:

- There is strong evidence (5 published studies with rigorous designs) that supportive housing (in general) is associated with housing stability and reduced hospitalization. Virtually all of these studies compared supportive housing with usual services for homeless persons.

- There is more limited evidence (less than 5 studies with rigorous designs) regarding which type of supported/supportive housing is most effective. In fact a number of studies have found inconsistent differences among various types of housing or types/degree of support. For example McHugo and also Goldfinger found group settings to provide more stable housing than supported housing. But Tsemberis found supported housing to be more effective in producing residential stability than a residential continuum.

- It does seem to be critical that a Section 8 or Shelter Plus Care voucher or other guarantee that housing will be affordable is part of the housing design. While there is no one type of support (case management, ACT, or other design) that is superior to others, it does appear that staff/client caseloads of 1/20 are highly desirable.

- There is level three (published studies with pre post or other less rigorous designs) for cost savings due to supportive housing. The largest of these studies was Culhane’s comparison of persons receiving a wide range of supportive housing with those who were in shelters at the same time. Because persons who are homeless or not stably housed used far more hospital days and jail days, the cost to the public was only slightly more for those receiving supportive housing.

- Level three evidence also exists for findings that suggest consumers prefer independent, permanent and integrated housing. Satisfaction is greater in this type of housing, and when individual choice and needs are matched with the appropriate setting.
C. A Nelson and colleagues review in 2007\textsuperscript{16} focused on residential and support options for serving the homeless. Appendix I presents a table with 16 controlled studies (7 with randomized controls and all but one including some housing option).

- Six studies compare some form of permanent housing with “standard care.” Permanent housing is far more effective, with an average effect size of .67.
- Three studies compare case management and housing with case management alone, finding the combination more effective. (The effect size in the Rosenheck study is .37. However, Clark and Rich\textsuperscript{17} argue that case management alone is effective for persons with low or moderate symptoms or substance use.)
- Only one study (Goldfinger\textsuperscript{18}) compared group residential with supported housing, finding no difference in housing measures. (See also the McHugo study cited above, which compared hybrid models but did not find an advantage for scatter site housing.)
- Three studies found a better quality of life in supported housing, including fewer housing problems, a higher subjective quality of life regarding one’s housing, and more choice and control over one’s housing those who did not have access to the housing program.\textsuperscript{19}
- Four studies found housing and support to also reduce hospitalization and jail.
- No studies consistently found improvements in symptoms or substance abuse associated with housing/services unless substance abuse services were part of the model.

D. The Housing First Model.

In the past five years Housing First has been instituted in a number of cities, both in scatter site and integrated housing development models. A primary reason is the poor luck that traditional approaches have had—which condition housing on acceptance of treatment, particularly substance abuse treatment. (See Rog, 2004, cited above.) Findings from the best of these programs are described below.

E. Evidence regarding adaptability to special populations

- Persons with co-occurring disorders

As noted above (Rog and Nelson reviews), many studies have found persons with substance abuse problems do less well with housing interventions than those without a co-occurring disorder.

The McHugo and colleagues’ randomized experiment for homeless persons with co-occurring disorders in Washington DC favored integrated housing services over “parallel” (scatter site) housing in days of stable housing, reduction of psychiatric symptoms, and life satisfaction, especially for male participants.\textsuperscript{20}
The Housing First approach yields a different pattern of findings. In Pathways to Housing, 90% are dually diagnosed and outcomes are not better or worse for these persons. Compared to comparison group members, Pathways to Housing participants are less likely to access substance abuse treatment but no more likely to have symptoms, less likely to be using alcohol heavily, and equally likely to be using drugs heavily.\(^{21}\)

- **Criminal justice**

  The NY/NY study (Culhane) also looked at the impact of prior shelter use on outcomes when persons were released from prison. Persons with mental illness had higher reincarcerations as did those who used the shelter system again. The authors conclude that focusing on housing stability in a relatively small percentage of those released could significantly reduce reincarcerations.\(^{22}\) Several other studies have shown housing instability to be linked to higher contact with criminal justice officials, especially for prisoners returning to the community.\(^{23}\)

  AB2034 programs are California-specific programs of intensive case management for homeless individuals or those at high risk. In Los Angeles in particular, persons targeted were those with severe mental illness being released from jail. Not all these programs included housing. The report to the Legislature\(^{24}\) cites these statistics:

  - Number of consumers incarcerated decreased 58.3%
  - Number of incarcerations decreased 45.9%
  - Number of incarceration days decreased 72.1%

- **HIV**

  There is some evidence that housing instability (homelessness) increases HIV risk behaviors and utilization of emergency departments and inpatient hospitalization.\(^{25}\)

**F. Service patterns**

- **Pathways to Housing** is a very successful program, so it is useful to see what services the program provides. Clients must agree to once a week visits to assure safety. There is an ACT team with 24/7 coverage. Transitional employment is also provided (20% are working or in school). About 70% participate in some form of treatment for substance abuse. For 450 participants, staffing is: 4 staff responsible for housing services, 40 service coordinators, 6 team leaders, 3 psychiatrists, 3 nurse practitioners, 3 nurses, 2 vocational specialists, and 2 clinical directors. Consumers make up 30% of the staff.\(^{26}\) Note that in a Housing First model that values consumer choice the ACT team principles must change somewhat.\(^{27}\)
Some programs include employment and education program opportunities linked to the housing.

Attempts to provide supported housing with staff to client ratios of less than 1:20 can result in neglect and lack of coordination between landlord and service provider.\(^{28}\)

Some programs (e.g., LAMP in Los Angeles) have used a respite/crisis program to help re-stabilize clients and get them back into their apartment.

G. What outcomes can you expect?

For supported/supportive housing programs in general, as calculated by Nelson (op cit.) the effect size (how much better the experimental program is than the comparison) is in the range of .65 regardless of the type of comparison.

The results below are taken from the Pathways to Housing randomized control study comparing a Housing First model with a continuum model over 36 months. Differences at each time period are statistically significant.

**Figure 1: Proportion of time stably housed (Pathways to Housing)**

![Figure 1](image1.png)

**Figure 2: Proportion of time literally homeless (Pathways to Housing)**

![Figure 2](image2.png)
Capsule Summary of Evidence: Effective, Efficacious, Promising, or Emerging, Not Effective, or Harmful

Effective compared to usual services with respect to increasing housing tenure and stability and reducing hospitalization and jail stays.

Effective on housing variables compared to case management or ACT alone, at least for persons with severe impairment.

Effective in the Housing First variant.

Promising compared to usual services with respect to quality of life, quality of housing, and other subjective factors.

Promising compared to usual services with regard to cost offsets. Several studies have found significant cost offsets of providing housing and services. Hospital, ER, emergency transport and jail are the main sources of cost reductions. There is some inconsistent evidence from San Francisco, and study designs have not been rigorous or the alternative services always clearly defined. There is some evidence that the costs and cost offsets vary greatly by where the homeless persons were recruited (hospital or street) and that over two years initial cost differences are attenuated.

Methodological problems and gaps in the research

- Weak evaluation designs (few randomized controlled trials, lack of fidelity scales, unclear models being tested, no uniformity in alternative condition).
- “A common language has failed to emerge.” [Supported vs. supportive]
- There is little similarity of outcomes measured across studies. In general, housing varies on these dimensions: a) resident choice and control, b) physical quality/habitability, c) privacy, d) the concentration of consumers in the housing, e) location, and f) safety. These variables have not been considered consistently in research.
- A wide range of housing types is needed, but there is little evidence of which types are best for which clients.

Other unresolved issues.

- Many studies document that clients value choice and autonomy in housing. And some provide evidence that if choice is provided it reduces some negative outcomes (such as psychiatric symptoms). However, other studies have indicated that independent units (which most persons choose if they have the choice) are associated with higher rates of feelings of isolation and depression and anxiety. Negative effects may be more likely among older persons living independently.
**Information regarding implementation**

**Fidelity**

The Pathways to Housing program is developing a fidelity scale.

**Extent of implementation**

The 2004 New Freedom President’s Commission on Mental Health recommended the creation of 150,000 units of integrated housing developments to end chronic homelessness among persons with mental disorders and their families. HUD set a goal of creating 40,000 units between 2005 and 2009. States and other localities have also made ambitious plans. Between 2002 and 2006, 37,500 units of permanent supportive housing were created through the McKinney-Vento Homeless Assistance Grants Programs, target at persons with mental health and substance abuse problems. The Corporation for Supportive Housing estimates there may be an equal number funded through other means, but there is no centralized data. At the same time housing policies under the Bush administration have resulted in the loss of at least 150,000 housing vouchers and their redirection toward higher income less-disabled persons. And the number of new rental units for disabled persons under Section 811 declined by 25% between 2002 and 2006.

No information was found on the extent of implementation of different models of supportive housing.

A number of communities began moving from a continuum model to supported housing in the 1990s. These programs were not oriented toward the homeless per se, but toward replacing one model of services and housing with another. A number of these programs are described at: [http://townhall.townofchapelhill.org/homelessness/plan/d-housing_first_best_practices.pdf](http://townhall.townofchapelhill.org/homelessness/plan/d-housing_first_best_practices.pdf)

**Barriers to implementation**

The primary barrier is financial, as housing vouchers and new affordable housing units are in decline. A secondary barrier is attitudes about the relationship of treatment and housing that are holdovers from an earlier period (such as believing recovery is not possible for persons still using alcohol or other drugs or that recovery is not possible for persons who don’t admit their mental illness). A insidious aspect of this barrier is the feeling by many staff that “we already do that.”

**Costs**

- Pathways to Housing cites a $22,000 cost per client per year.
- Culhane’s study found a cost of about $13,570 per person per year, however, there was a reduction in health, corrections and shelter costs of $12,145. So the net cost (from a societal perspective) is $1,425 per year per person. Per placement it is closer to $6,000. Note that a very wide range of “supportive” housing was included, including transitional and congregate living.
Rosenheck summarized the results of a number of studies, finding that service costs increased modestly as did favorable housing outcomes. Offsets in use of other public services were not measured.

Information available for assisting in implementation of Supported Housing

- Information on supported housing and integrated housing development. The Corporation for Supportive Housing website has many resources available. http://www.csh.org/

- Among many other documents and toolkits resources include a “how to” manual for accessing Mental Health Services Act funds for integrated housing development. http://www.csh.org/index.cfm?fuseaction=page.viewPage&pageID=3656&nodeID=81

  - Information on ACT-supported Housing First (Pathways to Housing model) http://www.pathwaystohousing.org/Articles/Research.html

- Resources include a variety of training videotapes.

- For more information on trainings related to housing-linked ACT contact: Pascale Jean-Noel, Director, or Margaret Kaczorowski, Program Assistant actinst@pathwaystohousing.org

- For more information related to Housing First trainings: info@pathwaystohousing.org

- Note that trainings on site of 1-2 days, or a week are available, as are 9-12 month teleconference trainings. Technical assistance is also available. Dr. Sam Tsemberis for further information, 212-289-0000 ext. 1101

  - In Los Angeles, Beyond Shelter uses a Housing First model and has a variety of resources and trainings available. http://www.beyondshelter.org/home.html

  - A recent federal report on nine Housing First models, including three in California, is available. A range of models is included, from Pathways to Housing to integrated housing development approaches. The San Francisco Direct Access to Housing program has 876 units. For a description see: The Applicability of Housing First Models to Homeless Persons with Serious Mental Illness Final Report http://www.huduser.org/Publications/pdf/hsgfirst.pdf
End Notes
2 Both the Americans with Disabilities Act (ADA) and the U.S. Supreme Court’s 1999 decision in Olmstead v. L.C. require that individuals with disabilities be permitted to live and work in the least restrictive setting—which includes housing.
3 The Mental Health Services Act Housing Toolkit. Available at: www.dmh.ca.gov/Programs/MHSA/docs/resource_listings/MHSAToolkit-Final.pdf
4 Lipton, ibid.
5 Hopper, K., & Barrow, S. M. (2003). Two genealogies of supported housing and their implications for outcome assessment. Psychiatric Services, 54(1), 50-54. In a related fashion, The Cochrane Review of supported housing distinguishes between "designated supported housing" in which there are individual tenancies in a single building with staff on site, and "outreach" models in which individuals have tenancy and are supported by case managers.
6 Hopper and Barrow, op cit.
7 Mental Health Services Act Housing Toolkit, op cit.
8 The Cochrane review distinguishes between "designated supported housing" in which there are individual tenancies in a single building with staff on site, and "outreach" models in which individuals have tenancy and are supported by case managers. McHugo and colleagues describe the empirical overlap this way: “Modern continuum housing programs incorporate many of the philosophical and technical underpinnings of the supported housing model. Supported housing programs are impractical in many settings because of the shortage of decent, safe low-income housing. Consequently, hybrid programs are the norm today; few programs resemble those specified by the two models.” McHugo, G. J., Bebout, R. R., Harris, M., Cleghorn, S., Herring, G., Xie, H., et al. (2004). A randomized controlled trial of integrated versus parallel housing services for homeless adults with severe mental illness. Schizophrenia Bulletin, 30(4), 969-982. CSH-funded sites may even be hybrids that include, in one site, both supportive housing units and regular rental units.
15 However, this conclusion is also not found consistently. McHugo (op cit.) found satisfaction greater in the housing that integrated treatment and housing to a greater degree. Another study found meeting consumer preferences increased quality of life, but did not affect symptoms or housing stability. O’Connell, M., Rosenheck, R., Kasprow, W., & Frisman, L. (2006). An Examination of Fulfilled Housing Preferences and Quality of Life among Homeless Persons with Mental Illness and/or Substance Use Disorders. The Journal of Behavioral Health Services and Research, 33(3), 354-365.


23 Roman, C. G., McBride, E. C., & Osborne, J. W. L. (2005). Discussion Paper: Moving Toward Evidence-Based Housing Programs for Persons with Mental Illness in Contact with the Justice System National GAINS Center, Funded by the Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration


26 Corporation for Supportive Housing website: http://www.csh.org/index.cfm?fuseaction=Page.viewPage&pagId=502


28 For some graphic and relevant examples from San Francisco see: http://www.nhi.org/online/issues/152/notosupportive.html A Philadelphia study looked at those who left supported housing. Three fifths left for positive reasons (move to better housing), and two-fifths for negative (with subsequent negative consequences.) Wong, Y.-L. I., T. R. Hadley, et al. (March 2006). 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

29 CIMH uses the following definitions: Effective—achieves outcomes in controlled experimental research (random assignment or consistently strong comparison groups) with a range of typical clients in usual practice settings; Efficacious—achieves outcomes in controlled experimental research (random assignment or consistently strong comparison groups) with a homogeneous group of clients in a highly controlled setting; Promising—some positive research evidence (i.e. pre- post designs), of success and/or expert consensus; Emerging practice—recognizable as a distinct practice with “face” validity or common sense test; Not effective—significant evidence of a null, negative, or harmful effect.


32 Drawn from Roman, C. G., McBride, E. C., & Osborne, J. W. L. (2005). Discussion Paper: Moving Toward Evidence-Based Housing Programs for Persons with Mental Illness in Contact with the Justice System National GAINS Center, Funded by the Center for Mental Health Services of the Substance Abuse and Mental Health Services Administration

1341-1360.


Appendix 1: Evidence Summaries circa 2000 and 2004


<table>
<thead>
<tr>
<th>Study Author(s), Year</th>
<th>Design</th>
<th>Improvements Over Time</th>
<th>Housing Condition Difference?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bebout et al. (2001)</td>
<td>RA/SH vs. Continuum Housing</td>
<td>Y Y Y Y</td>
<td>Y – in favor of Continuum Housing vs. SH</td>
</tr>
<tr>
<td>Goldfinger et al. (1999)</td>
<td>Randomized SH vs. Staffed Group Homes (ECU)</td>
<td>Y Y Y N</td>
<td>Y – in favor of Supported Housing vs. Range</td>
</tr>
<tr>
<td>Susser et al. (1977)</td>
<td>Randomized Broad spectrum of housing with or without CI</td>
<td>Y Y – –</td>
<td>Y – in favor of CI</td>
</tr>
<tr>
<td>Hurlbut, Hough, and Wood (1996)</td>
<td>Randomized Four Section 8 and CM combinations</td>
<td>Y – – –</td>
<td>Y – in favor of groups with access to Section 8, regardless of CM approach</td>
</tr>
<tr>
<td>Lipton et al. (1988)</td>
<td>Randomized NY/NY Housing vs. status quo</td>
<td>– Y Y –</td>
<td>Y – in favor of Program Housing</td>
</tr>
<tr>
<td>CMHS Housing Initiative Steering Committee (2002)</td>
<td>Multi-site (6 sites) Cross-site Quasi-Experiments SH vs. Group homes, supervised apartments</td>
<td>Y Y Y Y</td>
<td>N</td>
</tr>
<tr>
<td>Tsander and Eisenberg (2000)</td>
<td>QE/SH vs. SROs, community residences, other</td>
<td>Y – – –</td>
<td>Y – in favor of Supported Housing vs. Range</td>
</tr>
<tr>
<td>Lipton et al. (2000)</td>
<td>Quasi-Experiment NY/NY Supportive Housing of various Intensities (structure and independence)</td>
<td>Y – – N</td>
<td></td>
</tr>
<tr>
<td>Culhane et al. (2002)</td>
<td>Quasi-Experiment SH vs. Matched controls (not in housing)</td>
<td>– Y Y Y</td>
<td>Y – in favor of Supportive Housing vs. status quo</td>
</tr>
<tr>
<td>Kasprzak et al. (2000)</td>
<td>Longitudinal</td>
<td>Y – – Y</td>
<td></td>
</tr>
</tbody>
</table>

**Characteristics of Studies of Housing and Support Interventions**

<table>
<thead>
<tr>
<th>Study</th>
<th>Study location</th>
<th>Sample size</th>
<th>Control or comparison group</th>
<th>Experimental group</th>
<th>Study type</th>
<th>Comparable groups at baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickey et al. (1996); Dickey, Latimer, Powers, Gonzalez, &amp; Goldfinger (1997); Goldfinger et al. (1999)</td>
<td>Boston</td>
<td>C: 63 E: 55</td>
<td>Resolving consumer households—group living</td>
<td>Supported housing, independent living</td>
<td>Experimental</td>
<td>Yes</td>
</tr>
<tr>
<td>Hurlburt, Wood, &amp; Hough (1996)</td>
<td>San Diego</td>
<td>C1: 90 C2: 91 E1: 90 E2: 91</td>
<td>No Section 8 certificate with comprehensive (C1) or traditional case management (C2)</td>
<td>Supported housing: Section 8 certificate with comprehensive case management (E1) or traditional case management (E2)</td>
<td>Experimental</td>
<td>Yes</td>
</tr>
<tr>
<td>Lipton, Natt, Sabatin (1986); Rosenheck, Kasprzak, Frisman, &amp; Liu-Mares (2003)</td>
<td>New York San Francisco, San Diego, New Orleans, Cleveland</td>
<td>C1: 23 E1: 26 C1: 90 C2: 188 E1: 182</td>
<td>Standard treatment No Section 8 certificate with case management (C1) or standard treatment (C2)</td>
<td>Residential treatment Supported housing: Section 8 certificate with intensive case management</td>
<td>Experimental</td>
<td>Yes</td>
</tr>
<tr>
<td>Conrad et al. (1998)</td>
<td>Chicago</td>
<td>C: 180 E: 118</td>
<td>Standard treatment</td>
<td>Case-managed residential treatment (11-month program consisting of case management, residential housing, substance abuse counseling, vocational services, housing placement, self-help)</td>
<td>Experimental</td>
<td>Yes</td>
</tr>
<tr>
<td>Burman et al. (1995)</td>
<td>Los Angeles</td>
<td>C: 65 E1: 67 E2: 144</td>
<td>Standard treatment</td>
<td>Social model residential program providing integrated mental health and substance abuse treatment (E1) or community-based nonresidential program using the same social model (E2)</td>
<td>Experimental</td>
<td>Yes</td>
</tr>
<tr>
<td>Tsemberis (1999); Tsemberis &amp; Eisenberg (2000)</td>
<td>New York</td>
<td>C: 3,811 E1: 139</td>
<td>Residential continuum</td>
<td>Pathways Supported Housing—supported housing and ACT</td>
<td>Quasi-experimental</td>
<td>No</td>
</tr>
</tbody>
</table>

*Note.* C = control or comparison group; E = experimental group.
## Effect Sizes for Housing Outcomes for Housing and Support Intervention Studies

<table>
<thead>
<tr>
<th>Study</th>
<th>Longest follow-up period</th>
<th>Housing outcome measure</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent housing and support* versus standard care</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hurlbut, Wood, &amp; Hough (1996)</td>
<td>24</td>
<td>Proportion living in independent housing</td>
<td>.57</td>
</tr>
<tr>
<td>Lipton, Nutt, &amp; Sabatini (1988)</td>
<td>12</td>
<td>Proportion living in permanent housing</td>
<td>.79</td>
</tr>
<tr>
<td>Rosenheck, Kaprow, Priaman, &amp; Liu-Mares (2003)</td>
<td>36</td>
<td>Number of days housed (past 90 days)</td>
<td>.51</td>
</tr>
<tr>
<td>Tsemberis (1995); Tsemberis &amp; Eisenberg (2000)</td>
<td>60</td>
<td>Proportion continuously housed</td>
<td>.92</td>
</tr>
<tr>
<td>Greenwood, Schaefer-McDannell, Winkel, &amp; Tsemberis (2005); Tsemberis, Gulec, &amp; Nakae (2004)</td>
<td>24</td>
<td>Proportion of time in stable housing</td>
<td>.77</td>
</tr>
<tr>
<td>Drake, Yovelitch, Belmont, Harris, &amp; McGuire (1997)</td>
<td>18</td>
<td>Number of days in independent housing (past 60 days)</td>
<td>.66</td>
</tr>
</tbody>
</table>

Average effect size

Permanent housing and case management versus case management only

<table>
<thead>
<tr>
<th>Study</th>
<th>Longest follow-up period</th>
<th>Housing outcome measure</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hurlbut et al. (1996)</td>
<td>24</td>
<td>Proportion living in independent housing</td>
<td>Unable to compute</td>
</tr>
<tr>
<td>Rosenheck et al. (2003)</td>
<td>36</td>
<td>Number of days housed (past 90 days)</td>
<td>.37</td>
</tr>
<tr>
<td>Clark &amp; Rich (2003)</td>
<td>12</td>
<td>Proportion of time in stable housing</td>
<td>Unable to compute</td>
</tr>
</tbody>
</table>

Average effect size

* Support involves either some form of support or case management.  
* Given in months.