

A Review of Case Management for People Who Are Homeless: Implications for Practice, Policy, and Research

by
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Abstract

Case management programs for homeless people have proliferated since the 1980s but some have questioned the meaning and clarity of the term case management while others have questioned its effectiveness for serving clients. This paper first attends to conceptual issues, identifying primary functions and process variables for understanding and describing case management services. The paper next describes models and approaches to case management for various client subgroups and specialty areas.

The paper also reviews the empirical literature on homelessness and case management, especially as it relates to treatment effectiveness and critical factors. Several conclusions are postulated, including that some case management approaches, especially assertive community treatment (ACT), are effective for helping people who are homeless with severe mental illness; frequent service contact is a critical ingredient leading to positive treatment retention and housing outcomes; case management is more effective with some clients than others. A number of gaps in our knowledge of case management are also identified.

The final section of the paper presents recommendations on exemplary practices. These include recommendations related to critical staff skills and abilities, service principles, case management models, and organizational practices.

Lessons for Practitioners, Policy Makers, and Researchers

Recommendations for homeless case management practitioners include focusing service delivery efforts upon:

- Conducting assertive, community-based outreach;
- Nurturing trusting, caring relationships with clients;
- Respecting client autonomy;
- Prioritizing client self-determined needs;
- Providing clients with active assistance to obtain needed resources;
- Maintaining small case loads; and
- Implementing ACT approaches.

The federal government is also encouraged to promote exemplary practices through knowledge dissemination, advocacy, and financing actions and to promote new research and knowledge on case management services for people who are homeless.

Introduction

Within the past two decades, case management has functioned as a cornerstone of efforts to serve people who are homeless. During that period, providers and researchers have recommended case management services for homeless people, policy makers have facilitated the development of case management programs through grant announcements, and Congress has encouraged States to provide case management through legislative initiatives (McKinney Act, PATH, mental health block grants). Program developers have adapted case management services for a variety of subgroups of homeless people, including those with severe mental illness, substance abuse disorders, people with dual diagnoses, pregnant women, and homeless families. Case management services need to be considered within a broad perspective that recognizes the multiple and serious needs of people who are homeless, the varying subgroups, the need for multiple interventions at various levels of society, and the crucial importance of adequate housing resources (Dennis et al., 1991; Federal Task Force on Homelessness and Severe Mental Illness, 1992; Morse, 1992). Undoubtedly, however, case management has become in practice one of the most common services to people who are homeless.

Why have case management services been recommended and implemented so frequently in the area of homelessness? In part, there is a general zeitgeist of case management within human services. More specifically, however, the initial development of case management services has resulted in part from several interrelated, key assumptions about the problems, causes, and solutions of homelessness:

1. People who are homeless have serious and multiple problems and unmet service needs and problems (Ball & Havassy, 1984; Morse & Calsyn, 1986).
2. The services and resources necessary to met these human needs are contained within a fragmented system of disparate service organizations (Rog, 1988).
3. Additionally, the service system is often structured and operated in such a manner that it poses a number of obstacles and barriers for clients in need; clients, therefore, often have difficulty accessing needed services and resources (Goldfinger & Chavatz, 1984; Rog et al., 1987).
4. Case managers are thought to be necessary to “facilitate access,” “coordinate,” “negotiate,” and ensure services for client needs (e.g., Francis & Goldfinger 1984; Levine & Fleming; 1986; Oakley & Dennis, 1996; Rog et al., 1987).

Note the service system function inherent in these assumptions. As Hopper, Mauch, and Morse (1989), framed it, case managers perform “microsurgery on the service system.” Not surprisingly, some have considered case management to be one intervention strategy for changing and improving the entire service system as well as improving individual client outcomes (Mechanic, 1991; Raif & Shore, 1993; Surlis, Blanch, Shern, & Donahue, 1992).

An additional set of beliefs about people who are homeless also facilitated the development of case management programs. Specifically, homeless people have often been described as markedly mistrustful and suspicious of service providers, and to highly value their autonomy (e.g., Francis & Goldfinger, 1986). Case managers have been conceptualized as workers whose first task is to engage people who are homeless, developing and nurturing trust and a working alliance (Francis & Goldfinger, 1986).

While compelling arguments have been for case management services, significant questions and concerns have also arisen. Confusion about exactly what constitutes case management has been common. Others have questioned the effectiveness of case management.

The remainder of this paper will attend to these and related issues. Specifically, the following sections will:

- Discuss definitional and conceptual issues related to case management.
- Identify and briefly discuss different case management models or approaches used with homeless clients.
- Review the research literature related to the empirical study of case management approaches for people who are homeless, with a special emphasis upon the effectiveness of case management services. Conclusions will also be discussed and knowledge gaps identified.
- Draw from the literature to identify exemplary case management practices with people who are homeless. This section will also provide recommendations about how agencies can promote exemplary services.
- Conclude by providing additional recommendations on ways the federal government can promote exemplary practices.

Definitional and Conceptual Considerations: What is Case Management?

Across all health and human services, case management remains a loosely defined service which is less well understood than one might expect, given its widespread application and popularity” (Willenbring, Ridgely, Stinchfield, & Rose, 1991, p. 14). This statement applies equally to the field of homelessness, where case management has been characterized as “a much discussed but poorly defined concept” (National Resource Center on Homelessness and Mental Illness, 1990, p. 1). The conceptual confusion has resulted in part from a lack of definitional specificity. In the past decade, some theorists and researchers have focused increased attention on conceptualizing and defining case management (e.g., Raif & Shore, 1993; Willenbring et al., 1991). Particularly useful is the review and conceptualization of Willenbring and colleagues. They suggest that case management services can be defined in terms of their specific service functions. They identify six primary functions that characterize case management (see also Joint Commission on Accreditation of Hospitals, 1979):

- Client identification and outreach: to attempt to enroll clients not using normal services

- Assessment: to determine a person's current and potential strengths, weaknesses and needs
- Planning: to develop a specific, comprehensive, individualized treatment and service plan
- Linkage: to refer or transfer clients to necessary services and treatments and informal support systems
- Monitoring: to conduct ongoing evaluation of client progress and needs
- Client advocacy: to intercede on behalf of a specific client or a class of clients to ensure equity and appropriate services

They also note four additional functions which are common but variable across case management services:

- Direct service: provision of clinical services directly to the client
- Crisis intervention: assisting clients in crisis to stabilize through direct interventions and mobilizing needed supports and services
- System advocacy: intervening with organizations or larger systems of care in order to promote more effective, equitable, and accountable services to a target client group
- Resource development: attempting to create additional services or resources to address the needs of clients

Another common additional function of case management is *discharge planning*. Discharge planning often incorporates many of the above functions as case managers help clients plan to transition from one type of setting or service program to another.

The description of functions helps to provide more specificity to the definition of case management. However, as Bachrach (1992) noted in the broader area of mental health services, there is still a lack of consensus "about the precise meaning of case management" (p. 209; see also Rog et al., 1996). In part, this results from the practice of a number of different models or approaches to providing case management. Different case management models generally (but not always) perform the primary functions identified above; however, they vary not only in the presence or absence of the additional functions listed above, but also in other important ways. Especially important are the *operational or process* characteristics of case management programs, which Willenbring and colleagues distinguish from the functions of case management. The process characteristics measure more *how* case management services operate, rather than *what* they do. The following list of seven process variables, selected and modified from Willenbring and colleagues, are relevant for understanding similarities and differences between specific case management services.

- Duration of services (varying from brief, time limited to ongoing and open-ended)
- Intensity of services (involving frequency of client contact, and client-staff ratios)
- Focus of services (from narrow and targeted to comprehensive)

- Resource responsibility (from system gatekeeper responsible for limiting utilization to client advocate for accessing or utilizing multiple and frequent services)
- Availability (from scheduled office hours to 24-hour availability)
- Location of services (from all services delivered in office to all delivered in vivo)
- Staffing pattern (from individual case loads to interdisciplinary teams with shared caseloads).

In addition to these seven variables related to *how* case management programs operate, it is useful to consider *who* is involved in case management:

- Who is the client target population?
- Who are the staff, and especially what are their disciplines?

Case Management Approaches and Models

Table 1 provides a listing of case management models and approaches which have been described in the published scientific or practice literature (or included in widely circulated government monographs or reports). The phrase models and approaches are used to include both (a) programs that are well-established in theory or research as well as (b) programs that represent emerging methods that are commonly used in clinical practice, even in the absence of an extensive, preexisting theoretical or research basis. Table 1 includes data, where available, considering several of the key operational or process variables described above. These case management approaches are briefly described below under five client subgroups: people with severe mental illness, people with severe mental illness and co-occurring substance abuse disorders (dual diagnoses), people with substance abuse disorders, people with primary health disorders, and homeless children and families. The majority of the published literature concerns case management approaches for people with severe mental illness; thus, the following discussion is more developed in this area, and, unfortunately, underdeveloped in other areas.

Severe Mental Illness

As shown in Table 1, *intensive case management (ICM)* approaches (see Rog et al., 1987) have been widely used with a variety of homeless subpopulations, including people with substance abuse disorders, homeless families, and especially with people with severe mental illnesses. ICM is illustrative of an approach that has emerged from the field in the absence of an extensive, preexisting theoretical or research basis. Its popularity for homeless clients has in part probably arisen from clinical principles—assertive and persistent outreach, reduced case loads, active assistance in accessing needed resources—that are compelling given the nature of clients’ needs and system characteristics. Not surprisingly, however, ICM approaches are sometimes mentioned without extensive description of their programmatic functions or process characteristics. Further, the comparability of ICM across programs or homeless subgroups is unclear and

questionable; there appears to be significant operational differences across ICM programs but these are often not systematically described or assessed.

Assertive community treatment (ACT) programs represent another common approach for homeless people with serious mental illness. (For this review, the ACT approach is meant to encompass programs identified in the literature as Continuous Treatment Teams or CTTs. The terms ACT and CTT are sometimes may represent subtle programmatic differences but often in practice and research they are synonymous terms, or indistinguishable from one another.) The ACT model has been highly researched and well-established as an effective community-based intervention for non-homeless people with severe mental illness (see Stein & Test, 1985; Burns & Santos, 1995). It has also been widely disseminated throughout a number of states as a model program for some people with severe mental illness (Deci et al, 1995). ACT proponents eschew the term case management (e.g., Stein, 1992); despite the validity of these objections, ACT is often included within reviews of case management and will be considered within this rubric in this paper as well. The model does indeed differ significantly from many case management approaches, especially in its emphasis on direct treatment and services, shared caseloads, and use of an interdisciplinary team that includes specialists such as psychiatrists and nurses.

The ACT model has been adapted in various ways to improve its relevance to a homeless population. These adaptations parallel many of the principles followed by homeless outreach and ICM programs; they include assertive outreach, engagement strategies, and an increased emphasis on clients' resource and housing needs (Dixon et al., 1995; Morse et al., 1992). Investigators have also added new innovations to the basic ACT model by adding both adjunct lay citizen community workers (Morse et al., 1997) and mental health consumers (Dixon et al., 1994) to the treatment team. Despite these modifications, one advantage to the ACT approach is its clarity and specificity in program principles, functions, and operations. The model is well described, and researchers have developed an instrument to measure the degree of fidelity of any one program to the ideal ACT program (McGrew & Bond, 1995; Teague et al., 1998). ACT teams for homeless clients with severe mental illness have recently been widely promoted and replicated through the CMHS ACCESS program (Johnsen, Samberg, Calsyn, Blasinsky, Landow, & Goldman, 1998).

A review of the literature (see also Table 1) suggests that a number of other case management approaches have also been developed for homeless people with serious mental illness. In addition to ICM and ACT approaches, two additional models are *Clinical Case Management* and *Social Network Case Management*. Both provide sound theoretical justifications for their clinical and social network components, respectively, while also incorporating basic ICM principles and characteristics. At present, however, neither model appears to be widely practiced.

The *Strengths Model* is often advocated and implemented for the broad (non-homeless) population of people with severe mental illness (Rapp, 1993). Features of this model include a focus on the environment as well as the individual client, use of

paraprofessional staff, emphasis on client strengths rather than deficits, and a priority placed on following client directed interventions. The Strengths Model has recently been implemented in a large demonstration for homeless clients in Kansas under the ACCESS grant (Johnsen et al., 1988).

The *Critical Time Intervention* (CTI) is a new approach developed and tested for people who are homeless with severe mental illness (Susser, Valencia, Conover, Felix, Tsai, and Wyatt, 1997). The CTI approach focuses upon strengthening a person's long-term ties to other services and supports while providing emotional and practical support during the critical period of a transition from shelter to housing.

Also appearing within the literature are approaches which are noteworthy for their use of consumers as case management staff. The use of consumers and peers has been incorporated within various models of case management, including homeless ACT teams that include a consumer advocate (Dixon et al, 1994) and ACT teams which are almost exclusively comprised of consumer staff (see Herinckx, Kinney, Clarke, & Paulson, 1997). *Consumer Case Management* approaches have advocacy support, offer important work roles for former patients, and may be helpful for engaging clients suspicious of traditional mental health providers.

Finally, *Broker Case Management* approaches, meanwhile, are also commonly provided. Broker models emphasize assessment, planning, referral, and monitoring functions without extensive outreach, linkage or direct service contacts. While common, they are not recommended for homeless clients (Morse, Calsyn, Klinkenberg, Trusty, Gerber, Smith, Templehoff, & Ahmad, 1997).

Dual Diagnosis

Many case management programs for homeless people with severe mental illness have also served large number of persons who also have a co-occurring substance abuse disorder. Often, this has been a defacto rather than planned intervention, given the high prevalence of co-occurring substance abuse disorders among homeless people with severe mental illness (Federal Task Force on Homelessness and Severe Mental Illness, 1992). More recently, there have been increased efforts to address the specialized needs and problems of people with these dual diagnoses, especially among the non-homeless dually diagnosed population (e.g., Durell, Lechtenberg, Corse, & Frances, 1993; Jansen, Masterton, Norwood, & Viventi, 1992; Jerrell & Ridgely, 1995; Osher & Kofoed, 1989; Young & Grella, 1998). These services often follow the principles of *Integrated Treatment* (e.g., Mercer, Mueser, & Drake, 1998; Minkoff & Drake, 1991), which focuses upon an interdisciplinary, concurrent treatment approach to substance abuse, mental health, and other related client needs. A recent review of the treatment outcome research for all dually diagnosed clients recommended that integrated treatment approaches be comprehensive and incorporate assertive outreach, case management, individual and group and family interventions, while assuming a longitudinal, step-wise motivational enhancement approach to substance abuse treatment (Drake, Mercer-McFadden, Mueser, McHugo, & Bond, in press).

There have been relatively few case management interventions for dually diagnosed homeless persons, although there is a recent trend toward increased program development and research. The literature includes an example of social network therapy/intensive case management which promotes referral and linkage to existing substance abuse treatment providers rather than integrated treatment (Kline, Harris, Bebout, & Drake, 1991). Additional publications describe integrated treatment-case management approaches for homeless clients. Blankertz and White (1990) described a model of case management incorporated within a residential program for dually diagnosed homeless clients. In this model, case managers provided initial outreach and engagement, individualized service and rehabilitation planning, linkage for needed resources and services, and facilitated psychoeducational substance abuse treatment groups. Case management services were designed to follow clients whether or not they successfully completed the residential program. Intensive/clinical case management programs (Drake et al., 1997) and ACT programs (Meisler, Blankertz, Santos, & McKay, 1997) have also been modified to incorporate integrated treatment concepts and methods for people who are homeless and dually diagnosed. Additional projects are currently under development and research.

Substance Abuse

Case management is regarded as an important component in substance abuse services but there are few studies specifying program models and elements (see U.S. DHHS, 1992). Similarly, case management approaches have also been recommended and implemented for homeless clients with substance abuse problems, although apparently not with the same frequency as for homeless people with serious mental illness. Notable exceptions were three homeless case management demonstration programs funded by NIAAA. McCarty, Argeriou, Krakow, and Mulvey (1990) designed and described an intensive case management service in Boston as a key component within a stabilization project for homeless people with substance abuse disorders. The intensive case management service was designed to assist clients overcome their distrust of service providers, coordinate needed treatment and support needs, and “guide them along the recovery continuum” (p. 39). The case management role emphasized linkage and monitoring activities as well as support. Similarly, in the Louisville project, Bonham, Hague, Abel, Cummings, and Deutsch (1990) emphasized the role of intensive case managers in the Louisville project as connecting clients with community resources, especially AA and NA meetings, rather than as direct service provision. The Louisville project followed other common case management practices (e.g., individualized planning, monitoring) while also focusing on the need for outreach. The Minneapolis project, meanwhile, adapted the ACT model to serve homeless people considered as chronic public inebriates (Willenbring, Whelan, Dahlquist, & O’Neal, 1990). This team was designed to provide services and continuity of care in addition to conducting assessments, planning, and other common functions. It is important to note that the above descriptions reflect the *intended* program models; in actual practice, some significant discrepancies occurred (high client to staff ratios, considerable staff turnover, and other implementation problems—see above references as well as Orwin et al., 1994, and Willenbring et al., 1991).

Primary Health

Case management for homeless people has also been recommended as an effective strategy for enhancing and supplementing primary health care services (Savarese et al., 1990; Stephens et al., 1991). In practice, case management has been an important element in Health Care for the Homeless projects across the United States (Savarese et al., Stephens et al). However, few detailed descriptions appear in the literature concerning the specifics of homeless health care case management services. Savarese and colleagues have illustrated how core case management functions have been integrated within normal homeless health care teams activities in a myriad of ways. Stephens and colleagues, meanwhile, also emphasize the integration of case management within a multidisciplinary team, while stressing the importance of a case manager to monitor and broker the system. They also argue that:

health care providers need to focus more on case management activities, which may include activities not necessarily associated with the provision of health care services (for example, finding and providing food, clothing, shelter, and accessing entitlement eligibility) to achieve the ultimate goal—stabilization—and when possible, reintegration of the homeless person back into society (p. 15).

Kuczynski (1992), writing about a Health Care for the Homeless project in Minnesota, provides one illustration of how nurses can perform outreach and follow-up home visits to provide support and help clients with parenting and accessing needed resources. Steward (1992), meanwhile, described the role of specialized case managers in the same HCH project in helping homeless people set and keep health appointments, track specialized health information (e.g., immunization records), and access new resources as they transition into stable housing.

In general, however, the literature, lacks detailed models of case management with primary health, especially for specialized client subgroups. Homeless children have been identified as one high risk group in need of intensive case management health services (Roth & Fox, 1990). More attention is also needed for homeless people with poly-disorders, such as mental health, substance abuse, and HIV or AIDS; one such project stresses the importance of case management in creating linkages across multiple systems of care (Brindis, Pfeffer, & Wolfe, 1995). Worley and colleagues (1990) recommendations for integrated approaches for non-homeless people with severe mental illness appear equally applicable to homeless people with severe mental illness. Specifically, case management teams, such as ACT teams, could incorporate psychiatric nurse specialists to perform health screenings, health monitoring, education and disease prevention activities, while performing specialized medical linkage and coordination functions with other providers. Nurse practitioners could also be employed for providing primary care as well medical referral and monitoring.

Homeless Children and Families

Although the literature is very limited, case management services for homeless children and families should be considered on the basis of the specific subgroup targeted for services. Specifically, case management services have been described for young children

(Carman, 1991); runaway and homeless youths (Cauce, Morgan, Shantinath, Wagner, Wurzbacher, Tomlin, & Blanchard, 1993; Yates, Pennbridge, Swofford, & Mackenzie, 1991), including pregnant teens (Borgford-Parnell, Hope, & Deisher, 1994); and the entire homeless family (Rog et al., 1996).

Bassuk (1991) noted “there is a shortage of innovative programs” nationwide for homeless children. The Kidstart Program was developed as a case management model for homeless children by the Better Homes Foundation and IBM (Carman, 1991). There is a special emphasis on case managers engaging and networking the various agencies involved with homeless children (shelters, schools, social services) and in assessing the developmental progress and delays of young homeless children in social, emotional, and cognitive domains. Kidstart incorporates common features of most case management programs including service planning, linkage, and monitoring. Similar to other approaches for homeless people, Kidstart emphasizes personalized and comprehensive care (Bassuk, 1991).

Two programs for runaways and homeless youths implemented intensive case management programs (Borgford-Parnell et al., 1994; Cauce et al., 1993). The program by Cauce and colleagues was guided by a comprehensive focus, recognizing “that although many of these youths have mental health problems, their problems do not begin or end there” (p. 34). Emphasis was also placed on providing emotional support and nurture, assisting clients to master developmental tasks, active involvement in the multiple systems affecting adolescents, and intervention and support for the utilized social support networks of clients, which often involved peers. The specialized intensive case management program for pregnant homeless teens employed both nurses and social workers (Borgford-Parnell et al., 1994). In addition to providing health and social services the program philosophy stressed outreach and engagement, employing “unique strategies . . . to meet the complex and ever changing needs of this difficult-to-serve population” (p. 1030), building a trusting relationship, providing services in the field, concrete and active assistance, consistent support, and long-term interventions. Services included health assessments, social service assistance, and skill training and assistance with infant care. In addition to these mobile intensive case management programs, case management services connected with long-term residential shelters have also been developed for homeless teens (Yates et al.).

As Rog and her colleagues (1996) noted, despite its increasing popularity, there has been little explicit study of case management’s operations or effectiveness with (homeless) families (p. 68). Rog et al.’s description of a joint Robert Wood Johnson Foundation and HUD initiative provides a rare discussion of case management services for homeless families. The project recommended intensive case management for families with intensive support, frequent in vivo contacts, on going services, and close linkages with housing services (Rog et al., 1996).

Research Findings: What We Know and What We Don’t Know

This section of the paper reviews the empirical research on case management for homeless people in four areas: treatment specification and implementation evaluation, effectiveness, cost-effectiveness, and critical factors influencing client outcomes. Subsequently, the paper will summarize conclusions from the research about our knowledge of case management services for homeless people and also highlight gaps in the current knowledge base.

Treatment Specification and Implementation Evaluations

Programs need to be carefully described and measured in order to understand the nature of the intervention, properly interpret results, and assist replication efforts (e.g., Brekke, 1988). This is especially relevant for case management programs, given the considerable confusion and uncertainty in the field about the meaning of a case management program and since there are rarely pure models in actual practice. It is also important to evaluate how closely an operation measures to an ideal model or the intended program, since negative findings may result from implementation deviations rather than an ineffective model. Unfortunately, however, many case management interventions are poorly described, and fewer are observed or measured (for notable exceptions, see Johnsen et al., 1998; Mercier & Racine, 1991; Rog et al., 1996).

Specifying the treatment and measuring its implementation may reveal surprising if sometimes disturbing insights. Rog and colleagues, for example, found in a large multi-site study that an intervention intended as an intensive case management approach (with frequent client contact) actually only produced an average of 15 hours of direct client services and 15 client contacts during the first year of service. Similarly, First, Rife, & Kraus (1990) found that within a demonstration intensive case management program that "37 percent of the clients received either minimal or no linkage with needed services" (p. 90; see also Barrow et al., 1996). Also, Johnsen and colleagues (1998) adapted a standardized instrument measuring the treatment fidelity of six ACT programs and seven "modified" ACT programs included in the ACCESS demonstration grant. They found, however, several significant deviations from the ideal ACT model (time-limited instead of ongoing service commitment; lack of multidisciplinary staff) and that "(n)one of the programs . . . achieved fidelity scores as high as the traditional ACT programs" (p. 17).

Treatment Effectiveness

Experimental Studies. All other research variables being constant, the most valid conclusions about the effectiveness of case management services must be derived from experimental studies using random assignment. Table 2 summarizes ten completed randomized studies assessing the effectiveness of case management approaches for homeless people. Note that all ten studies involved homeless clients who had serious mental illness (some persons also had a co-occurring substance abuse disorder).

Eight of the ten studies found that positive client outcomes occurred for the experimental case management approach. In seven of these eight studies, the significant results included less time spent homeless/more days stably housed in the community (the other

study measured only treatment engagement and retention and not housing outcomes). Five of the six studies using an ACT approach found positive client outcomes. ACT interventions also sometimes produced other positive outcomes, such as improved service utilization or treatment retention and reduced psychiatric symptoms.

Two of the three intensive (or assertive) case management approaches reported positive outcomes (improved housing and, from one study that included psychosocial rehabilitation services, reduced symptoms). The one study of the CTI approach found positive outcomes on the housing/homelessness variables.

Note that the above paragraph summarizes the *differential treatment* effectiveness of the case management approaches against comparison treatments, which in some cases were other case management program. In addition, several studies reported *time effects* whereby clients in all conditions improved over time in certain areas, but without differential effectiveness between the experimental case management approach and the comparison services (see Table 2). These improvements over time included positive outcomes in family contacts, life satisfaction, income, self-esteem, and interpersonal adjustment. The use of other treatment comparison groups makes the interpretation of these results unclear. Case management—as well as the comparison conditions—may in fact be affecting these positive client outcomes, but they are difficult to detect without a no-treatment control group.

Quasi-Experimental Studies. In addition to the experimental studies, some investigators have studied the effects of case management interventions using quasi-experimental designs, including comparison groups without random assignment, simple pre-post-analysis, and retrospective reviews. The findings from such studies, however, should be considered much more cautiously, given a number of possible threats to the validity of the conclusions that are inherent in non-experimental designs (see Cook & Campbell, 1979). Table 3 summarizes eight homeless case management studies (one involved three separate projects) relying upon non-experimental designs or analyses. As shown, four of these studies involved subjects with severe mental illness, three with dually diagnosed subjects, and one (analyzing the three separate NIAAA projects) involved persons with substance abuse disorders.

Three of the four studies involving people with severe mental illness used ICM approaches, the fourth used ACT. The ACT study reported improvements in a number of areas, including in residential stability, social adjustment, vocational functioning, and decreased symptoms. The three ICM studies reported housing rates ranging between 51 percent and 63 percent over one year to 27 months assessment intervals. A relatively high rate (71 percent) of mental health service utilization was reported in one study, but two studies found surprisingly low rates of retention in case management services over time (30 percent in one study, 16 to 57 percent depending upon the criterion in another).

The three studies of services for dually diagnosed clients each integrated substance abuse services into mental services (one project used ACT, the other ICM/social network and clinical case management models and the third a combined residential and case

management program.) The ACT and CCM/Social Network studies both reported some positive findings, especially for improved housing stability, but only equivocal or minimal effects for substance abuse. The case management-residential program clients were more likely than comparison clients to achieve successful discharge on a composite variable related to stable housing, abstinence, and absence of rehospitalization; however, the overall rate of success was still low (29 percent to 8 percent).

Orwin and colleagues (1994) reported on three NIAAA-funded research demonstration projects involving case management interventions for homeless people with substance abuse problems. Using multivariate analysis, Orwin et al. found evidence of significant treatment effects for only one intensive case management intervention on housing permanence and independence variables. This same study showed equivocal results and time-limited results on economic, employment, and substance abuse variables. In the other two case management studies, Orwin and colleagues found at best minimal or equivocal results. Orwin et al., however, noted that the absence of more powerful results may have resulted from a number of research design and methodological problems (e.g., differential attrition) or from ineffective or low intensity case management approaches.

Cost-Effectiveness

This review of the literature found only one completed study on the cost-effectiveness of any case management approach for homeless people (Wolff, Helminiak, Morse, Calsyn, Klinkenberg, & Trusty 1997). Wolff and colleagues were able to collect cost data for a subsample of clients involved in the randomized design of three conditions: ACT-only, ACT with community workers, and broker case management (Morse et al., 1997). Results found that there were no significant costs differences between the three programs when a comprehensive cost analysis was conducted although the ACT programs produced better client outcomes (client contact, psychiatric symptoms, and client satisfaction); thus, both ACT interventions were more cost-effective than broker case management.

Critical Factors

Service Factors or Mediators. The research literature provides some support for the proposition that at least certain case management approaches, especially ACT, are effective ways of serving homeless people, especially those with serious mental illness. A subsequent question then arises as to whether there are particular factors that are critical for the success of effective case management interventions. From a research perspective, one of the best and most rigorous methods for answering this question is to conduct process evaluations that use multivariate analyses to specify the mediating variables or critical ingredients that are correlated with positive client outcomes within experimental studies showing positive effects. Unfortunately, very little of this type of research has been conducted in this field. Process or correlational analyses from quasi-experimental and simple pre-post studies also provide some useful information, though there are more possible threats to the validity of the conclusions. Table 4 provides information on five experimental and quasi-experimental studies providing data on service factors that may

lead to positive client outcomes. It is worth noting that across three studies, frequency of contact was associated with better client outcomes, specifically in the areas of housing stability (Barrow et al., 1996), retention in case management and housing (Rife et al., 1991), and positive client satisfaction (Morse et al., 1994). More frequent supportive services and mental health service contacts were associated with both stable housing and also positive client satisfaction (Morse et al.).

Client Characteristics or Moderators. A related question asks: what client characteristics moderate client outcomes? The answers to the question are important in order to identify clients who may be at high risk of poor outcomes and where further service innovations may be necessary to develop more effective approaches. Table 4 also describes six homeless studies that have identified client characteristics associated with outcomes. Four findings have occurred in two or more studies:

- Lower lengths of time homeless are sometimes associated with better housing and treatment retention outcomes
- Clients with fewer psychotic symptoms tend to have better outcomes
- Women tend to have better outcomes
- Clients without substance abuse problems tend to have better housing and treatment retention outcomes

Conclusions and Knowledge Gaps

Primary Conclusions. The review of the literature leads to several primary conclusions, including:

- Although more effectiveness research needs to be conducted, there is strong support to indicate that some case management approaches are effective for helping homeless people with severe mental illness into needed services and, more importantly, into stable housing.
- ACT has the most extensive body of supportive research; results consistently indicate its effectiveness for assisting homeless clients with severe mental illness to achieve stable housing and to maintain needed services. There is also some but less research to indicate that ACT is effective in a few other client outcome domains, including for reducing psychiatric symptoms.
- A very small set of studies suggest that ICM can be effective for helping clients to achieve stable housing.
- Frequent service contact tends to be an important critical ingredient leading to positive treatment retention and housing outcomes.
- Case management services tend to be less effective with certain clients: men, persons with more psychotic symptoms, persons with longer homelessness histories, and people with co-occurring substance abuse disorders.

Knowledge Gaps. While research studies have yielded important knowledge, there still remains significant gaps in the literature and in our knowledge. These limitations and knowledge gaps include:

- Little demonstrated research knowledge about how case management services can effectively serve homeless people who:
- have substance abuse disorders
- have dual diagnoses of severe mental illness and substance abuse disorders (see also Drake et al., in press, who concluded after a comprehensive a review of outcomes studies of integrated treatment for all populations of dually diagnosed clients that “from a research perspective, the status of integrated treatment for dual disorders remains that of a working hypothesis with only modest empirical support. Given the magnitude of the problem of dual disorders, more controlled research is needed.”)
- have primary health problems
- are children, youths, women, or families.
- have mental health disorders that do not qualify as severe mental illness
- A scarcity of information about the cost-effectiveness of homeless case management services
- A lack of knowledge about the most commonly used case management approaches in clinical practice especially in areas outside of mental health.
- A lack of innovations and experimentation about how case management approaches may be modified or supplemented to create *greater* levels of cost-effectiveness
- A lack of empirical and outcome research on consumer case management approaches.
- Little research on how current or adapted case management services can effectively produce outcomes for clients in domains other than housing and treatment retention, such as in employment, social support, substance abuse, and recovery and wellness.
- Relatively little information specifying the specific service factors or critical ingredients leading to positive outcomes, and
- Relatively little data specifying the exact nature and fidelity of case management programs.
- Little research on how case management services can be combined with other interventions—for example, various housing options—to improve outcomes.
- Little information of the impact of case management on *system* problems. In appears that case management performs the systemic “microsurgery” needed by individual clients (Hopper et al.) but at present there is little data to assess overall system change.

Lessons Learned for Exemplary Practices: Agency Level and Practitioner Recommendations

Criteria

A central question arises: what should be the criteria for determining exemplary case management practices for homeless people? Clinical wisdom that emerges from the field should play a part in determining exemplary practices. Additionally, however, consideration of empirical research, especially as it relates to effectiveness and cost-

effectiveness, should be a second important criterion. This is especially important in the current era of accountability (Freeman & Trabin, 1994) where payers ask for documented, hard outcomes for continued support of services. The recommendations provided below draw upon clinical wisdom within the field, empirical research (when possible), as well as the author's own beliefs. These recommendations are discussed within four categories: critical staff skills and abilities, specific service principles, case management models, and organizational practices.

Staff Skills and Abilities

While much more empirical research needs to be conducted, the literature does provide some impressions and recommendations on critical factors for successful case management staff. Most of these recommendations are related to knowledge, skills, and abilities that case managers working with homeless clients with severe mental illness should possess. As noted elsewhere (Swayze, 1992), it is important that case managers have a thorough knowledge of homelessness; obviously, those working in mental health also need a thorough understanding of severe mental health disorders. Most importantly, perhaps, workers need to be able to engage homeless clients with severe mental illness (Kline, 1993). Engagement requires a complicated set of skills and attitudes. It includes being able to establish and develop trusting and caring relationships, responding quickly to client need priorities, being dependable but flexible, and being adept at covertly assessing a client's often changing needs for intensive services or personal space (see Kline, 1993; Morse et al., 1996).

Agencies need to recruit, select, train, and supervise staff to develop skills and knowledge in the following areas:

- Homelessness.
- The specific content area or discipline: e.g., mental health, or substance abuse, or health, or youths, or families. Additionally, beyond their area of specialization, it is important that case managers receive training on the needs and services for prevalent co-occurring needs, such as substance abuse and health for mental health case managers.
- Engaging homeless clients and developing trusting relationships; this appears to be a crucial core skill that cuts across all specialty areas.
- Psychosocial assessments.
- Individualized service planning.
- Crisis intervention.
- Suicide assessment and prevention.
- Therapeutic physical management.
- A comprehensive review of local services and resources.
- The specific case management approach and methods.
- HIV/AIDS education and prevention.
- Burnout prevention.

Training should be intensive with periodic ongoing review and the addition of specialized, needed topics.

Service Principles

Programmatic recommendations and clinical experience (e.g., Dixon et al., 1995; Francis & Goldfinger, 1986; Kline, 1993; Morse et al., 1992, 1997; Rog et al., 1987) suggests that to be maximally effective case management services for homeless people should be guided by a core set of service principles that include:

- Assertive and persistent outreach to meet homeless people on their own turf (as well as on their own terms)
- Active assistance to help clients access needed resources
- Following the client's own self-directed priorities and timing for services
- Respecting client autonomy
- Nurturing trust and a therapeutic working alliance
- Small case loads for case management staff

Additionally, the research on service factors related to client outcomes for homeless people with severe mental illness suggests that staff should seek to provide frequent service contact. Higher levels of supportive services and mental health service contacts are also facilitative of better outcomes for clients with severe mental illness. Agencies should incorporate these principles and findings into case management programs for the homeless.

Case Management Models

Local agencies should ensure that their case management services for homeless clients are consistent with research findings on treatment effectiveness. As noted earlier, the research strongly supports ACT as a best practice for homeless people with severe mental illness. Some support also exists for ICM approaches as well as Critical Time Interventions (CTI).

Organizational Practices

Organizational and system practices and policies are also important, as others have commented. In part, organizations and systems need to empower case managers, giving them authority to access needed client resources (Swayze, 1992). Organizations also need to provide case managers with competent and regular clinical supervision (Rog et al., 1987). Further, it has also been observed that organizational policies can significantly affect homeless clients and case management services (Hopper et al., 1989). In particular, it is important for organizations and systems to provide flexible admission requirements, accommodating clients who are mistrustful or simply unable to comply with normal admission procedures (which sometimes routinely include requiring clients to undergo long office-based intake interviews, produce personal identification and records, or to admit to having psychiatric problems).

It is also likely that agencies can support and foster exemplary case management services by:

- Providing thorough initial training and frequent on-going educational opportunities.
- Focusing case management interventions on specific and realistic targets. As previously stated: “If expectations are too grand, case management will always fall short of its presumed capacity” (U.S. DHHS, 1992, p. 8).
- Conducting QA activities that include treatment specification and implementation evaluations (include treatment fidelity monitoring of ACT programs).
- Conducting outcome evaluations; this is important internally to assess the needs and progress of clients served, and it will be increasingly important to funders and policy makers who are more likely to require outcome evaluations in the future as a condition for continued funding.
- Using data to regularly engage in quality improvements
- Fostering attitudes and practices that promote further service adaptations and innovations.
- Developing, in partnership with state and local government, ongoing funding support for case management services (instead of relying on additional demonstration grants to continue services).

Promoting Exemplary Practices: Federal Level Recommendations

Given the current state of the research and knowledge base, the federal government should passionately pursue two broad courses of action: (a) promoting the adoption of existing exemplary practices, and (b) foster and encourage the development of new knowledge through additional research. The latter action is as necessary as the former, given that there is still much we do not know about effective and cost-effective case management practices for homeless people. Recommendations in each of these two areas are presented below.

Promoting Exemplary Practices

The federal government should promote exemplary case management practices through at least three activities: knowledge dissemination, advocacy, and financing.

Knowledge Dissemination. The federal government should promote exemplary practices through:

- A wide and timely distribution of current state-of-the papers
- The planning and implementation of regional or state conferences on exemplary practices
- The development and distribution of relevant training materials (manuals, videos, CD-ROMS)
- The development and distribution of a Best Practices for Homeless People Guidelines

Advocacy. The federal government should join forces with other groups to advocate for the wide spread implementation of exemplary practices. One current example is for the federal government to collaborate with NAMI on the schizophrenia PORT project, especially since the PORT treatment recommendations call for increased ACT services.

Financing. Federal officials should seek to revise policies, regulations, and legislation as necessary to use federal funding to promote exemplary practices. In particular, regulations and policies related to mainstream funding programs (Medicaid, Medicare, Block Grant, PATH grant) should be reviewed and revised to not only allow but to create incentives for the delivery of exemplary services. The growth of managed care within the public sector (especially Medicaid and Medicare) will exert increasing influence on the direction and extent of case management services; the federal government, both within HHS and through consultation to states and local government, should encourage or require the funding of exemplary practices through managed care contracts. HHS should also collaborate with HUD to emphasize the development and funding of exemplary practices through SHP supportive services grants. In addition to encouraging exemplary practices, the federal government should also require monitoring to ensure that delivered services are consistent with exemplary practices (e.g., by requiring treatment specification data, or treatment fidelity assessments). Finally, as noted elsewhere (U.S. DHHS, 1992), the federal government supports case management services through various programs and funding mechanisms, but “each funding source usually requires agencies to develop separate financial and service reporting requirements. The more funding sources, the more complex, costly, and inefficient it becomes to comply with and supply requisite information. Greater effort should be made to pursue development of coordinated data and reporting requirements, particularly among the Federal agencies that will increasingly support and influence the scope of case management services” (pp 8-9).

Promoting New Research

Exemplary practices for the beginning of the next millennium need to be developed from new program development and research efforts. As noted earlier, there is a critical shortage of research knowledge in a number of important areas. The federal government should place a priority on generating new knowledge by supporting program development and research in the following key areas.

- Research demonstrations of case management services targeted to subgroups of homeless people where current treatment effectiveness data is lacking. Specifically, this should include:
 - People with severe mental illness and co-occurring substance abuse disorders. This is a very prevalent set of conditions and yet little current research exists about approaches that improve substance abuse. Further, the dually diagnosed also suffer poorer outcomes in other areas (i.e., treatment retention, housing stability).
 - People with substance abuse disorders (only, or with milder mental health disorders). Approaches that re-engineer ACT teams for this population and that

integrate motivational enhancement therapy (Miller, 1995) may be promising for development and testing.

- Women with children and homeless families, especially those with non-severe mental health disorders. Again, a re-engineering of ACT or ICM principles combined with innovative psychotherapies may prove beneficial. Case management approaches used for children with severe emotional disorders may also be useful for some clients (e.g., Focal Point, 1993).
- People with primary health problems. ACT teams that integrate nursing specialists or nurse practitioners (Worley et al., 1990) may be one approach to investigate.
- Research demonstrations that modify or enhance existing case management approaches in order to improve other outcome domains for homeless people with severe mental illness. In particular, interventions and research are needed to improve employment, social support, and, especially, long-term recovery and wellness.
- Research demonstrations that determine the cost-effectiveness of existing case management services.
- Research demonstrations that adapt, modify, or create new case management approaches in order to enhance cost-effectiveness.
- Research that examines the combined effectiveness of case management and other services and resources, such as housing options.
- Descriptive research on the most common and highly regarded case management approaches in community practice.
- Evaluation research (treatment specification and implementation evaluations) that clarifies the nature of case management services in demonstration projects and in wide spread community practice.
- Evaluation research that identifies client characteristics and services factors affecting client outcome.
- Research that assesses the effectiveness of staff training and other dissemination efforts.
- Research that assess the impact of managed care and other significant policy changes affecting service delivery patterns and exemplary practices.

Table 1

Case Management Models and Approaches for Homeless Clients

Approach/ Model	References	Direct Services	Service Intensity		Staff Client Ratios	Service Locations	Staffing Pattern	Staffing Discipline	Special Emphasis/Descriptive Features
			Link/Refer Advocacy	Service Duration					
Target Population: People with Mental Illness									
Intensive Case Management (ICM)	Rog et al., 1987 Wasylenki et al., 1993	Some	Extensive	Ongoing	10:1 or 15:1 to 40:1	Community	Individual	ICM/Generalist	Emphasis on outreach assisting clients to access needed services and providing advocacy as needed
Assertive Community Treatment (ACT)	Dixon et al., 1995 Lehman et al., 1997 Morse et al., 1992 Morse et al., 1997	Intensive	Some	Ongoing	10:1	Community	Team	Interdisciplinary	Emphasis is on providing intensive treatment and support services <i>in vivo</i> , for an ongoing, open-ended period of time. Staffing is intensive, utilizing an inter-disciplinary team that includes psychiatrist and nurse and a shared caseload.
Clinical Case Management	Kline (1993)	Intensive	Some	Ongoing	10:1 to 20:1	Community	Individual	CCM/MH Generalist	Emphasis is placed on individual, therapeutic relationship between primary CCM and client, though attention is also given to resource needs and linkages. Services are provided in community and office-based.
Social Network Case Management (SNCM)	Kline et al. (1991) Bebout (1993)	Some	Some		10:1 to 20:1	In community and office	Individual		Emphasis is placed on increasing the capacity of the clients' social networks to interact and support each client while also performing ICM functions of outreach, and service linkage.

Approach/ Model	References	Direct Services	Service Intensity		Staff Client Ratios	Service Locations	Staffing Pattern	Staffing Discipline	Special Emphasis/Descriptive Features
			Link/Refer Advocacy	Service Duration					
Broker Case Management	Morse et al. (1997)	Minimal	Extensive	Moderate to ongoing	50:1 to 85:1	Office based	Individual	Generalist	Emphasis is placed on assessing, planning, referring and helping clients to access needed services and resources delivered by other providers elsewhere in the community, and monitoring ongoing needs. Contact tends to be office-based and less intensive.
Advocacy	Freddolino & Moxley (1992)	Some	Extensive						Emphasis is upon providing case- specific advocacy to facilitate clients gaining needed resources and services while promoting consumer involvement. Staff are generalist with training in mediation, negotiation, and mental health law. Advocacy services are designed to be ongoing, as needed.
Critical Time Intervention (CTI)	Susser et al. (1997)	Some	Extensive	Time limited – up to 9 months		In community			Key feature is that services are time- limited to a “critical period” during and after the transition from shelters to housing (limited to 9 months). Activities are otherwise similar to ICM, but with a special focus on assisting clients to develop stable, ongoing relationships within their natural and service support systems.
Target Population: Substance Abusers									
Intensive Case Management	Orwin et al. (1994) Willenbring et al. (1991)	Some	Moderate to Extensive	9 months	30:1				CMs link clients to service, monitor involvement, and assist (ICM) clients in problem-solving and recovery strategies.
ICM	Orwin et al. (1994)	Minimal	Moderate to Extensive	Decreasing but open ended					CMs assess client needs, plan, link with services, monitor.
ICM	Orwin et al., (Willenbring et al., 1991)	Some	Moderate		15:1 to 20:1	In community and office		SA Counselors/ Case Managers	Aggressive outreach, develop trusting relationship, counseling, practical assistance.

Approach/ Model	References	Direct Services	Service Intensity		Staff Client Ratios	Service Locations	Staffing Pattern	Staffing Discipline	Special Emphasis/Descriptive Features
			Link/Refer Advocacy	Service Duration					
Target Population: Homeless Families									
ICM	Rog et al.	Some	Some	Open- ended	20:1	Home and Office	Individual	Varied across CMs, - counselors, SWs, RNs	Intended as ICM, with frequent open- ended service. In practice an average of 15 contacts and 15 hours direct service per first year.

Table 2**Experimental Studies of Case Management Approaches for Homeless People**

Primary Reference	Client Group	Comparison/Design	n	Study Period	Main Findings
Hampton et al. (1992 – cited in Mueser et al., 1998)	Homeless SMI/homeless risk	ACT vs. standard CM	165	12 mos.	One ACT site improved stable housing. One ACT (with implementation problems) vs Standard CM non-significant
Herinckx et al. (1997)	SMI (31% homeless)	ACT vs. usual care	174	Up to 870 days	ACT produced greater engagement and better retention into treatment
Hurlburt et al. (1996)	SMI	Factorial: Section 8 Subsidy (yes, no) by case management (traditional vs. ICM)	361	24 mos.	Main effect for Section 8. CM non-significant
Korr & Joseph (1995)	SMI (State Hospital discharged)	Assertive CM vs. control	114	6 mos.	ACM produced better housing status
Lehman et al. (1997)	SMI	ACT vs. usual community services	152	12 mos.	ACT: reduced inpatient and ER use, increased community housing, reduced psych symptoms, (Time effects: family contact, life satisfaction)
Morse et al. (1992) (1993)	SMI	ACT vs. CMHC Clinic vs. Drop-in center	178	12 mos.	ACT produced more client contacts, higher utilization of needed resources, higher client satisfaction, and less homelessness (Time effects included: decreased symptoms; increased income, self-esteem, interpersonal adjustment)
Morse et al. (1997) (1998)	SMI	ACT vs. ACT plus Community Workers vs. Broker CM	165	18 mos.	ACT and ACT/CW: Greater service contacts, higher access and utilization of needed resources, reduced symptoms, higher client satisfaction ACT: more stable housing
Shern et al. (1996) (cited Mueser et al., 1998)	SMI Homeless	ICM plus Psychosocial Rehab. vs. Standard CM	168	24 mos.	ICM/PR produced better housing and symptom outcomes
Soloman & Draine (1995)	Homeless, released from jail	ACT vs. Forensic CM vs. Standard CM	117	1 year	No differences
Susser et al. (1997)	SMI Homeless	Critical Time Intervention (CTI) vs. usual services	96	18 mos.	CTI reduced homelessness

Table 3

Non-Experimental Outcome Studies of Case Management Approaches for Homeless People

Primary Reference	Client Group	Comparison/Design	n	Study Period	Main Findings
Barrow et al. (1996)	Homeless women SMI	Pre-post ICM	185	12 mos. and 24 mos.	One Year: 51% housed, 42% in shelters Two Year: 61% housed, 39% homeless <u>CM Retention:</u> 16% still active, 30% active until housed, 11% referred elsewhere, 43% Dropped out/inactive <u>MH Treatment Retention.</u> 71% some MH services
Blankertz & Cnaan (1994);	Homeless dually diagnosed	Quasi-Experimental: CM/Residential	176		Experimental had lower dropout rate (19% vs. 47%), and, among those who completed 60 days, higher
Blankertz & White (1990)		Program vs. 12-step residential			Successful discharge discharge rate (29% vs. 8%)
Drake et al. (1997)	Homeless dually diagnosed	Quasi-Experimental: ICM (Clinical CM and Social Network CM) vs Standard CM	217	18 mos.	ICM improved housing stability and marginal improvement of substance abuse
First et al. (1990)	SMI: Homeless at risk of homelessness	Post-only ICM	88	Up to 27 mos.	63.3% placed in housing
Meisler et al. (1997)	Homeless dually diagnosed	Pre-post (retrospective review) ACT/Integrated Treatment	114	12 to 48 months	Improvements: treatment retention, housing stability, community tenure. No or minimal effects: Substance abuse
Orwin et al. (1994) a. Boston	Homeless Substance Abusers (Post detox)	Quasi-Experimental Intensive Case management vs Customary aftercare	491	?	CM effective for improving housing permanence and housing independence; Equivocal improvement on abstinence, employment
b. Louisville	Homeless Substance Abuse (Post detox)	ICM vs. Standard CM	179	?	No reliable effects
c. Minneapolis	Homeless Substance Abusers	ICM vs. intermediate CM (45:1 ratio) vs. Usual Care	260	?	Intermediate CM tended to produce more effective substance abuse results and employment, though minimal and equivocal

Primary Reference	Client Group	Comparison/Design	n	Study Period	Main Findings
Rife et al. (1991)	Homeless	ICM	176	32 mos.	56.8% clients placed in housing; 30% remained engaged in ICM and housing 6 months or greater. For those retained in housing and ICM, improvements in some quality of life domains: general well being, living situation, leisure activities, finances, safety, health.
Wasylenki; et al (1993)	Homeless SMI	ACT: pre-post	59	9 mos.	Increased residential stability, social adjustment, and network size, vocational functioning; decreased symptoms.

Table 4

Services and Client Factors Related to Case Management Outcomes Service Factors (Mediators)

Study	Outcome Variable	Service Factor (Mediator)	Study Design
Morse et al. (1994)	Stable housing Client satisfaction	Supportive Services Housing Service Contracts Entitlement Service Contracts MH Service contacts Supportive services MH services Overall service contacts	Experimental/Multivariate Analysis
Dixon et al. (1994)	Receipt of Section 8 certificate	Representative Payee services (negative relationship)	Experimental/Bivariate Categorical
Barrow et al.	Retention in CM services Stable housing	Staff client interaction Continuing CM services	Pre-post/categorical
Herinckx et al.	Length of retention In treatment	ACT services	Experimental/Multivariate
Dixon et al. (1994)	Receipt of Section 8 certificate	Schizophrenia (negative relationship) Psychotic symptoms (negative relationship)	Experimental/Bivariate
Barrow et al. (1996)	Retention in CM services	Psychotic symptoms (negative)	Pre/post categorical
Morse et al. (1994)	Stable housing	Women (positive) Caucasian (positive)	Experimental/Multivariate
Rife et al.	Retention in CM services	Frequency of CM contact	Pre-post/Multivariate
Herinckx (1997)	Length of retention in treatment	Number of nights homeless (negative relationship)	Experimental/multivariate analysis
Hurlburt et al. (1996)	Housing stability	Gender (female) Time homeless (negative relationship) Alcohol problems (negative) Drug problems (negative)	Experimental/multivariate analysis
Rife et al. (1991)	Retention in CM services and in housing	Independent living skills, Age, Substance abuse (negative) Times homeless (negative) Number of hospitalizations (negative)	Pre-post/Multivariate analysis

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(1) This report include sites with some randomized, experimental procedures but results are cited here from a multi-site, quasi-experimental analysis

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