THE ROLE OF ORGANIZATIONAL CHARACTERISTICS IN DETERMINING PATTERNS OF UTILIZATION OF SERVICES FOR SUBSTANCE ABUSE, MENTAL HEALTH, AND SHELTER BY HOMELESS PEOPLE

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This study aims to advance understanding of service provision to the homeless population through investigation of the effects of organizational characteristics. A longitudinal study of homelessness obtained structured psychiatric interview data from 400 participants and these individuals' service use and organizational data from 23 organizations over the next 12 months. Substance abuse service use was associated with organizational funding diversity, professionalism, and focus of services on substance abuse service provision. Other mental health service use was associated with small organizational size, professionalism, and simplicity of organizational funding diversity. Shelter service use was associated with complexity of services and small organizational size and inversely related to professionalism of staff. Results suggest relevance of organizational characteristics to understanding service access and use, controlling for individual need factors. Only by examining interactions among individual and organizational characteristics across sectors of care can the complexity of service provision to this multifaceted population be approached.

INTRODUCTION

The published literature has consistently identified favorable outcomes promoted by services for the homeless population such as treatment for substance abuse and

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other psychiatric disorders (Pollio, Spitznagel, North, Thompson, & Foster, 2000). Despite the recognized benefits of such services, research examining service access and utilization in the homeless population has been limited, primarily focusing on individual predictors such as demographics and other personal characteristics (North & Smith, 1993; Gamache, Rosenheck, & Tessler, 2000). Recent services research with this population has addressed the complexities of individual service use with insertion of behavioral theories of health service utilization into the analytic models (Anderson, Castelli, & Levy, 1987; Padgett, Struening, & Andrews, 1990; Pollio, North, Eyrich, Foster, & Spitznagel, 2003; Pollio, Spitznagel et al.; Wenzel et al., 1995).

These approaches to understanding service utilization are limited by their primary focus on individual characteristics. Research has demonstrated that characteristics of organizations and systems of care may also play important roles in service delivery to drug-abusing and homeless populations (Sosin, 2001). For example, fragmented service planning for the homeless population has been found to impede effective delivery of the continuum of services for substance abuse and other psychiatric disorders (Calloway & Morrissey, 1998; Randolph et al., 2002). Responding in part to concerns over insufficient coordination of homeless care (Task Force on Homelessness and Mental Illness, 1992), the ACCESS program was created to encourage inclusion of organizational and system-level factors in designing service access and utilization. The ACCESS program's strategic efforts demonstrated improved service integration across programs (Morrissey et al., 2002), but these changes in the system unfortunately did not improve client outcomes (Randolph, et al.).

Health services utilization theory (Anderson, 1995; Gelberg, Andersen, & Leake, 2000) supports the need for this direction for investigation, identifying "enabling characteristics" consisting of organizational factors determining individual service access and use. Entitlements and specific service system characteristics may predict an important amount of individual service use not explained by the contribution of clinical needs and individual characteristics to the model (Gamache, Rosenheck et al., 2000). Although insurance did not predict treatment received by homeless people in one study (North & Smith, 1993), a more recent study found public health insurance strongly predictive of access to services (Wenzel, et al., 1995). It is certainly clear that a potentially fruitful "next step" in understanding service access and use for homeless persons is to examine individual behavior within the context of organizational and system characteristics.

To guide this inquiry, we follow the lead of D'Aunno and colleagues (D'Aunno & Vaughn, 1995; Friedmann, Alexander, & D'Aunno, 1999), who used organizational theory to analyze service patterns in outpatient drug abuse treatment. Organizational

characteristics that might determine service choices by homeless persons can be conceptualized in terms of four organizational characteristics identified by research that could potentially facilitate service accessibility and use in the homeless population: funding, complexity, size, and professionalism. Although somewhat interrelated, these concepts are reviewed individually below.

The first concept, funding, emerges from organizational needs to establish financial security. Utilization of outpatient drug treatment services has been found to be associated with financial resources of the agency providing the services (D'Aunno & Vaughn, 1995). A study of substance abuse treatment program effectiveness found organizational financial management to be associated with the program's quality of care (Heinrich & Lynn, 2002). Funding may be assembled from multiple sources carrying mandates that collectively shape the complexion of the organization's service provision profile. For example, funding from a source dedicated to a subset of the population may focus considerable interest on serving that subpopulation, potentially expanding or diverting the organization's mission from other agendas. More elaborate funding systems may generate more layers of organizational complexity, which in turn may impede access to general services. Illustrating this point, one study found primary care physicians' perceptions of mental health service quality to be negatively associated with the number of agency managed care contracts in the medical practice (Van Voorhees, Wang, & Ford, 2003).

The second concept, organizational complexity, has been defined by Hall and colleagues as "the number of separate 'parts' of the organization as reflected by the division of labor, number of hierarchical levels, and the spatial dispersion of the organization" (Hall, Johnson, & Haas, 1967, p. 906). Implicit in this definition is an association between greater complexity and increased bureaucracy, which has been shown to be inversely related to client benefits from the program (Martin & Segal, 1977; Crook, 2001). Organizations providing services to homeless persons may be ineffectual to the extent that they are overly complex and therefore difficult for potential clients to access and negotiate. Organizational bridges to help clients and negotiate these systems may improve outcomes. A Veterans Administration medical center study found that drug abuse recidivism decreased with the implementation of continuity of care teams helping patients span agency specialty areas (Lambert, 2002). Adding transportation to drug abuse services has been demonstrated to encourage utilization of medical and ancillary services by clients in drug abuse treatment (Lamb, 1990).

The third concept, organizational size, is also related to organizational complexity and is further proportionate to coordination and communication problems (Blau, 1972). Size and coordination costs may predict lost organizational productivity (Gooding & Wagner, 1985). Although larger, more complex organizations may

offer more service opportunities (Sosin, 2001), individuals may become lost in the maze of large systems, consistent with findings of a study predicting attainment of housing by a service-using homeless sample (Thompson, Pollio, Eyrich, Bradbury, & North, in press).

The fourth concept, professionalism, operationalized as level of organizational staff education and training, may enhance staff abilities to identify multiple service needs of clients. In practice, however, paraprofessionals provide the bulk of direct care in many settings such as group homes, residential facilities, job coaching, sheltered employment (Holland, 1998), and services to persons with severe mental illnesses (Rohde & Nehls, 1996). Professionalism of the workforce has been found to be associated with treatment innovations in a study of privately funded substance abuse treatment centers (Friedmann, et al., 1999; Knudsen & Roman, 2004) and with perceptions of good practice by service providers and recipients (Neale & Kennedy, 2002). Although research comparing professionals and paraprofessionals in promoting client change is mixed in other service settings (Durlak, 1979; Grant, Ernst, Streissguth, Phipps, & Gendler, 1996), the complexities of homeless service needs likely augment the importance of assessment and treatment planning skills. Staff professionalism may help offset the challenges posed by organizational complexity through provision of personal resources necessary to help clients negotiate complex and impersonal systems of care.

STUDY AIMS AND HYPOTHESES

The purpose of the current investigation was to advance the empirical basis for understanding service provision to the homeless population. The study examined the processes by which structural characteristics of service access and other organizational factors contribute to the shaping of utilization of services by the homeless population, controlling for individual differences. Based on the above literature review, it was hypothesized that service use would be facilitated by (1) a simplified funding structure, (2) focused service provision, (3) organizational compactness, and (4) professionalism of organizational staff. It was anticipated that smaller, specialized organizations would more than compensate for their fewer resources by providing more personal attention to client needs.

METHODS

SAMPLING

The cross-sectional data used for the current analyses were collected from a sample of 400 participants in a longitudinal NIDA-funded study of homelessness. For this study, individuals were considered homeless if they reported no current stable residence and/or had spent the 14 previous nights staying in a public shelter or in some other unsheltered location without a personal mailing address such as a

park, an abandoned building, a car, or on the streets. Additionally, individuals were considered homeless if they had stayed with relatives or friends ("doubled up") for more than six of the previous 14 nights or if they had no fixed address and had spent less than 30 days in an inexpensive hotel or motel.

Most (80%) of the sample was selected randomly from 12 homeless shelters; the remainder was recruited from street locations across the city (proportions based on previous research by this team considering representative sampling) (Pollio et al., 2003; Smith, North, & Spitznagel, 1992; Smith, North, & Spitznagel, 1993). Study participants were selected from shelters in numbers proportionate to shelter census from randomly generated computerized schedules based on current shelter rosters or bed counts. Street recruitment was conducted on foot along 16 computer-randomized street routes, each with computer-randomized starting points within the routes. All individuals encountered on street routes were approached for screening, not just those who "appeared homeless." Potential participants were screened with a few brief questions about where the individual had stayed recently. Eligible individuals were invited to participate in the study and upon providing informed consent were scheduled for a baseline interview. The participation rate among those eligible was 92%. More details of the sampling procedures are described in earlier publications (Pollio, North et al.; Smith et al., 1993).

INDIVIDUAL-LEVEL INSTRUMENTS/MEASURES

At baseline, all participants were administered a structured interview including sociodemographic sections of the National Comorbidity Study interview (Kessler et al., 1994); seven diagnostic sections of the Diagnostic Interview Schedule (DIS) (panic disorder, generalized anxiety disorder, mania, schizophrenia, antisocial personality disorder, depression, and posttraumatic stress disorder) (Robins et al., 1998); the alcohol and drug abuse sections of the Composite International Diagnostic Interview-Substance Abuse Module (CIDI-SAM) (Cottler & Compton, 1993); and the residence section and selected questions from the DIS Homeless Supplement (North & Smith, 1993; Smith et al., 1992; Smith et al., 1993).

These interviews were conducted by professional interviewers who had completed formalized training on the study instruments and procedures. The interviews were conducted at locations convenient to the study participants, most often at the study drop-in center, but also in shelters and restaurants or on park benches. The median interview time was 84 minutes.

Interviews were audiotaped, and the audiotapes were reviewed for establishing and maintaining fidelity to the instruments and study procedures. Interviewers recorded notes within specific fields provided for text entries in the diagnostic interview program. They also recorded handwritten notes regarding other comments

they wished to convey for consideration by the interview editor, and, finally, a summary description of the interview and interviewee.

ORGANIZATIONAL DATA

Of 29 organizations identified as providing services in the St. Louis area with a homelessness, mental health, or substance abuse focus, 23 participated in the study and completed surveys on organizational characteristics. Several factors determined nonparticipation of six organizations in the study: declining study participation or failure to complete the baseline organizational instrument (including one organization that ceased to exist before the baseline organizational survey was completed).

The organizational survey obtained information about the organizations' own characteristics, including organizational size, services offered, staffing, and funding sources. Participating organizations also provided prospectively collected service use data for the homeless study participants who used them over the 12-month interval following these individuals' index interviews. The data on these individuals' service use were collected from participating organizations in one of three ways, largely dependent on the organization's level of technological sophistication. The service use data from most shelters and transitional housing providers in the city were extracted from an integrated management information system (MIS) in a centralized intake, referral, and case management network. This MIS system was designed and maintained by a private firm with input from the project described in this publication. The service use data were obtained from the few organizations not participating in the city's centralized intake, referral, and case management network by manual review of organizational rosters and sign-up sheets by project personnel. State-funded community mental health centers, alcohol and drug treatment centers, and psychiatric inpatient units in the city provided the service use data from the state's Medicaid and Purchase of Service (POS) databases.

CONSTRUCTION OF VARIABLES AND MERGING OF DATABASES

Dependent variables for the study were organization-provided individual-level service use for three sectors of care, defined as any use of services (yes/no) for the following service use domains: substance abuse, mental health, and homelessness sectors. Organizational data were standardized to provide systematic information on the use of services in the categories of substance abuse, mental health, or shelter during the 12-month study period. Organization-reported service use for each homeless individual was calculated across all organizations within each of the three sectors of service use (substance abuse, mental health, and shelter), allowing for use of multiple organizations by individuals.

Independent variables were derived from organizational data to represent the organizational characteristics described in the literature review. Funding was

measured by number of separate funding sources (e.g., federal or state funding, municipal funding, charitable organizations such as United Way, private donations, etc.) reported by the organization. Organizational complexity was operationalized as number of service types provided. Organizational size was operationalized as number of full time paid organizational employees. Professionalism was measured as the ratio of full time paid professional staff (defined as having a doctoral or registered nursing degree) to total full time paid staff. Other independent variables pertained to characteristics of the homeless individuals obtained from interviews of them at index, including demographic variables and current (12-month) diagnoses of substance abuse or mental illness.

Organizational data on service use by the homeless individuals and organizational data describing the organizations' characteristics were merged with data from the interviews of the homeless individuals through the unique study identification numbers of the homeless individuals in the interview data set, the organizational service use data set with the unique organization identification numbers in the organizational data set, and the organization's service use data set. This was possible because both organization and individual identification numbers were linked in the organizational service use data set. This combined data set allows prediction of service use of the homeless individuals in the study during the subsequent 12-month period (dependent variables) from characteristics of the organizations, controlling for baseline characteristics of the homeless individuals provided at the start of the study (independent variables).

DATA ANALYSIS

Descriptive statistics were used to describe the sample, using percentages for categorical variables and means and standard deviations for continuous variables. Service access by sector was predicted from organizational characteristics (number of funding sources, number of types of services provided, number of employees, and proportion of professional employees). The Generalized Estimating Equations (GEE) method of SAS was used to control for repeated behavior patterns within individuals, in this case, predicting patterns of types (using logistic regression, for Tables 1 through 3) and numbers of organizations chosen. To control for effects of index diagnoses of alcohol use disorder, drug use disorder, and mental illness in the preceding year, these variables were included as covariates in the GEE models.

RESULTS

SAMPLE

Study participants were generally male (75%), non-White (74% African American, 5% Hispanic, and 3% other), and 41.0 years old on average (SD = 10.4) with the equivalent of a high school education (11.9 mean years, SD = 2.2). Less

than one half (46%) had ever been married, and only 6% were currently married. They had been homeless for a mean of 5.1 (SD = 10.6) years. In the past 12 months they had spent a mean of 119 (SD = 111) nights in 1.9 (SD = 1.7) shelters.

More than three quarters (78%) of the sample met lifetime criteria for any alcohol or drug abuse/dependence and more than one half (59%) met one-year criteria. Alcohol (61% lifetime, 43% one year) was the most prevalent substance of abuse, followed by cocaine (44% lifetime, 32% one year) and cannabis (35% lifetime, 11% one year). Nearly one half (48%) of the sample met lifetime criteria for a nonsubstance Axis I psychiatric disorder and less than one third (31%) met criteria in the previous year. Most prevalent among these diagnoses was major depression (26% lifetime, 12% one year), followed in prevalence by mania (9% lifetime, 7% one year).

ORGANIZATIONS

The 23 participating organizations included 12 providing substance abuse programs, 9 providing mental health programs, and 12 night/day shelters (7 of which also offered substance abuse services and 4 specialized in mental health services). Overall, these organizations had a mean of 4.8 (SD = 2.4) and median of 4 funding sources (funding), a mean of 4.2 (SD = 2.8) and median of 5 types of services offered (service types), a mean of 48.0 (SD = 28.8) and median of 39 paid employees (size/complexity), and a mean of 21.3 (SD = 44.2) and median of 4 paid professionals (professionalism).

TOTAL SERVICE USE

Organizational reports identified 276 individuals (69% of the index sample) who used services at one or more of the 23 organizations during the 12-month period following the index interviews. The mean total number of units of substance abuse, mental health, and shelter services by individuals who used these services was 111 (SD = 181).

SUBSTANCE ABUSE SERVICE USE

Organizational reports identified 56 individuals (20% of the service sample) who used substance abuse services during the 12-month period, even though 190 (69% of service users) during the 12-month period had contact with organizations offering substance abuse services. Of 161 individuals with a current substance use disorder at index, 38 (24%) had used substance abuse services, although 118 (73%) had documented contact with organizations providing substance abuse services. Those who used substance abuse services had a mean of 59 (SD = 97) units of use.

MENTAL HEALTH SERVICE USE

Organizational reports identified 63 individuals (23% of the service sample) who used mental health services during the 12-month period, and 78 individuals (28% of service users) had documented contact with organizations offering mental health services. Of 106 individuals with a current nonsubstance Axis I diagnosis at index, 32 (30%) used mental health services during the following 12-month period, and 34 (32%) had contact with organizations offering mental health services. Those who used mental health services had a mean of 53 (SD = 132) units of use.

SHELTER SERVICE USE

Organizational reports identified 181 individuals (66% of the service sample) who used shelter services during the 12-month period, even though 217 (79% of service users) had documented contact with organizations providing shelter services. Those who used shelter services had a mean of 132 (SD = 201) units of use.

PREDICTION OF SERVICE USE

Results of multiple regression models using GEE are shown in Tables 1 through 3. Organizations having greater numbers of funding sources, fewer service types, and more professional staff showed higher likelihood of substance abuse service use (see Table 1). This suggests that funding diversity, professionalism, and focus of services on substance abuse service provision are associated with use of substance abuse services. Organizations having fewer funding sources, greater numbers of employees, and higher proportions of professional staff showed higher likelihood of mental health service use (see Table 2). This suggests that funding diversity is

TABLE 1
PREDICTING SUBSTANCE ABUSE SERVICE USE (N = 318)

Service Characteristics*	DF	Slope	SE	Wald 95% CL		$\chi 2$	p
# funding sources	1	0.34	0.10	0.15	0.53	12.51	<.001
# service types	1	-0.21	0.09	-0.37	-0.04	5.93	<.015
# paid employees	1						ns
proportion professional staff	1	12.02	3.18	5.80	18.25	14.34	<.001

* (Controlling for 12-month nonsubstance Axis I mental illness, alcohol use disorder, drug use disorder, and individual patterns)

TABLE 2
PREDICTING MENTAL HEALTH SERVICE ACCESS (N = 318)

Service Characteristics*	DF	Slope	SE	Wald 95% CL		χ2	p
# funding sources	1	-1.23	0.53	-2.26	-0.20	5.49	.019
# service types	1						ns
# paid employees	1	0.18	0.07	0.05	0.33	6.78	.009
proportion professional staff	1	53.79	24.41	5.94	101.64	4.85	.028

* (Controlling for 12-month nonsubstance Axis I mental illness, alcohol use disorder, drug use disorder, and individual patterns)

inversely related to use of mental health services and that organizational size and professionalism are associated with use of mental health services. Organizations having more service types, fewer employees, and lower proportions of professional staff showed higher likelihood of shelter service use (see Table 3). This suggests that diversity of services is associated with use of shelter services and that professionalism and organizational size are inversely associated with shelter service use.

TABLE 3
PREDICTING SHELTER SERVICE ACCESS (N = 318)

Service Characteristics*	DF	Slope	SE	Wald 95% CL		χ2	p
# funding sources	1						ns
# service types	1	0. 62	0.11	0.40	0.84	30.70	<.001
# paid employees	1	-0.07	0.02	-0.10	-0.03	14.39	<.001
proportion professional staff	1	-36.68	5.75	-47.95	-25.42	40.72	<.001

* (Controlling for 12-month nonsubstance Axis I mental illness, alcohol use disorder, drug use disorder, and individual patterns)

Examination of the effects of adding the organizational variables to the models predicting service use from the individual variables only found statistically significant gains in the goodness of fit by this enlargement of the models. Addition of organizational variables to the model predicting substance abuse service use

yielded a significant improvement in goodness of fit ($\chi^2 = 55.20$, df = 4, p < .001 for predicting substance abuse service use; $\chi^2 = 122.95$, df = 4, p < .001 for predicting mental health service use; $\chi^2 = 155.51$, df = 4, p < .001 for predicting shelter use). The base models included only the individual-level variables defined below in Tables 1 through 3 (diagnosis, controlling for individuals as units of service use), and the significance in gains of statistical fit refer to the models with the organizational-level variables added. The models including only the individual-level variables were not bivariate because they contained a number of individual-level variables in the predictive model.

DISCUSSION

Findings of the study suggest that (1) substance abuse service use is associated with funding diversity, professionalism, and focus of services on substance abuse service provision, (2) mental health service use is associated with funding simplicity, organizational size, and professionalism, and (3) shelter service use is associated with diversity of services but inversely associated with professionalism and organizational size (see Table 4).

TABLE 4

SUMMARY OF RESULTS: PREDICTION OF SERVICE USE FROM ORGANIZATIONAL CHARACTERISTICS

Organizational Characteristics	Substance abuse service use	Mental health service use	Shelter use	Hypothesized
Funding # sources	+	—		—
Complexity # service types	—		+	—
Size # employees		+	—	—

Professionalism
    Proportion professional
    employees
	+	+	—	+

* (Controlling for 12-month nonsubstance Axis I mental illness, alcohol use disorder, drug use disorder, and individual patterns)

Revisiting the study's hypotheses, complexity of funding positively predicted substance abuse service use and negatively predicted mental health and shelter use. For the organizational complexity hypothesis, number of service types negatively predicted substance abuse service use but positively predicted shelter use. For the organizational size hypothesis, number of employees was positively associated with mental health service use and negatively associated with shelter use. Professionalism

was positively associated with substance abuse and mental health service access and negatively with shelter use. Although professionalism appeared to be a significant facilitator in determination of mental health and substance abuse service access across shelter and substance abuse sectors of care for this homeless sample, the relevance of professionalism has not been consistently demonstrated in studies of other populations (Durlak, 1979).

No sectors of care matched study hypotheses for all four organizational characteristics, and no organizational characteristics were consistent with study hypotheses for all three sectors of care. Actually, all three sectors of care had unique patterns of associations with the organizational characteristics. Thus, service use by homeless persons across sectors of care was found to be associated with different organizational characteristics. Differences in associations across sectors of care therefore contradicted the general hypotheses in specific instances. For example, complexity of funding sources predicted substance abuse service use, while simplicity of services (fewer services) predicted use of substance abuse services. In the case of substance abuse services, complexity of funding that increases available resources does not translate into service diversification. Rather, funding complexity facilitates substance abuse service use unencumbered by complex services that might otherwise hinder access. The finding that larger organizations had greater use of mental health services, though contrary to expectations, suggests that homeless people in this sample gravitated to major centers dedicated to mental health care (reflected in association of service use with simplicity of funding and high professionalism) for managing their mental health needs. The unanticipated finding of increased service complexity in association with shelter use is somewhat intuitive, because shelters offering more services might be more popular with homeless clients.

These findings have important implications for provision of services to homeless populations across multiple sectors of care. Comparison of goodness of fit of models adding organizational variables to individual variables reveals the strong contribution made by the organizational variables to prediction of service use in all three sectors examined. Because organizational factors shape patterns of service access and use among different sectors of services, construction of services needs to be tailored for each sector. "One-stop shopping" service designs may not serve all needs, particularly not for substance abuse sectors, in which focus on the main service mission may further facilitate use of services. Although not the central focus of this analysis, the study's findings of low rates of service use relative to the observed substance abuse and mental health service rates represent a significant concern for this population.

Agency service utilization patterns observed in this homeless sample suggest that utilization of agency services may be partially contingent on the characteristics

of those agencies. These associations might suggest, for example, that simplicity of focus on substance abuse services may enhance utilization of agencies providing substance abuse treatment, professionalism of services may encourage utilization of agencies providing mental health services, and diversity of services may promote utilization of agencies providing shelter services. Agencies seeking to specialize in specific types of services may benefit from understanding the associations of agency characteristics with utilization of services.

This study had noteworthy limitations. The sample was not representative of homeless populations of other parts of the U.S., and the division of data into sectors of care left small sample sizes for some analyses. Because this investigation did not include outcomes, service use can only be assumed to be associated with positive outcomes. Another limitation was the incomplete set of organizational data currently available, most conspicuously lacking representation from the medical sector that largely overlaps with the one third of organizations providing services to this sample. Further, because nothing is known about what information might not be available to the study from nonparticipating organizations, speculation cannot venture to address the potential biases imposed on the findings due to the absence of these data. However, it can be said that services data are lacking information from health care facilities that were not included in this study. Finally, these hypotheses were limited in their specification. Further elaboration of the organizational hypotheses and inclusion of outcomes for a more complete test of the model are avenues for future research based on this study's contributions.

Results from this study suggest the relevance of organizational characteristics to understanding service access and use, even when controlling for individual-level need factors reported by previous research. Organizational characteristics might also be included as part of the health services model currently used by homelessness research (Anderson, 1995; Gelberg et al., 2000; Pollio et al., 2003; Wenzel et al., 1995; Wenzel et al., 2001). Examination of the complex interactions among individual and organizational characteristics across multiple sectors of care will be needed to model the complexity of service provision to this difficult and complex population. An additional aspect of the surrounding climate of the service system for homeless individuals that could not be addressed in this study was connectedness among service provider organizations. The St. Louis area service system was well connected after the recent application of the ACCESS program in this area. Future studies in less "connected" systems may be able to address this additional characteristic of organizations in providing services to homeless populations. Future work also needs to be done to validate service use data provided by organizations through comparison with other sources of information on service use, such as reports of the service users themselves.

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