

Texas HIV Case Management Project: An Exploration of Current Thinking and Practice

HIV Case Management

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 *Texas Department of State Health Services, HIV Care Services Group*

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Texas HIV Case Management Project

Executive Summary

The 2006 reauthorization of the Ryan White Treatment Modernization Act highlights the Texas Department of State Health Services need to refocus the role of case management in the provision of HIV services across the state. The goal of this study is to accurately describe the systems currently in place, and to identify models and best practices, creating a springboard from which to create strategies to improve the case management system across Texas. The study consists of a review of the literature regarding case management practices and models; structured conversations with jurisdictions similar to Texas and Ryan White (RW) Part A-funded cities in Texas; a field study which included direct client/case manager interactions, case management chart reviews and extractions, interviews with case managers and case management supervisors, interviews with clients; and an on-line survey of case managers and case management sites across Texas.

Conversations with partner jurisdictions found that case management systems are often defined by funding mechanisms and overall service delivery structures. Either as a result of changes in the authorizing Ryan White legislation or from internal pressures, other jurisdictions have either instituted changes to case management systems and practices or are engaged in the examination of their systems and practices with the goal of revision and improvement. Almost uniformly both state (Part B) and local (Part A) jurisdictions engage in tiered case management systems in which clients are evaluated, through either acuity or assessment, and then provided case management services based on intensity and type of need.

The field study portion was conducted between January and June of 2008 at 8 case management sites. The study found the most common reasons for case manager contact with clients were assistance with medication, checking in and updating paperwork, transportation assistance, financial assistance and food assistance. Case managers cited client independence and self sufficiency as the goal of case management, however no evidence was found of a client being discharged from case management for these reasons. Of the few instances of discharge that were evidenced, the discharge resulted from client death or migration. The results also indicate disparities between the client and case manager reported routine and required activities of case management and the findings of session observations and chart reviews. These activities include routine screenings for mental health, substance abuse issues and client risk, assessment of client needs and acuity, referral to services such as ambulatory medical care and oral health, and education on issues such as medication adherence. Both clients and case managers interviewed reported these activities as routine, however few charts reviewed contained evidence to substantiate those reports. In the examination of substance abuse screening, 56% of case managers interviewed reported routine screening at least annually, however only 46 of the 115 charts reviewed contained documentation of this practice. Concerning medication adherence education, 66% of clients reported that case managers had discussed this issue with them, but only 40% of charts documented discussions with clients on this issue. Almost uniformly, case managers report the most effective change to improving case management practices in the state would be to reduce the amount and redundancy of paperwork associated with this service.

The survey of all case management sites found that the majority of case managers have some form of higher education with most being trained in social work or nursing and have been providing case management for 5 or more years. Seventy percent of agencies require continuing training. The average amount of time spent on paperwork and administrative activities was 17 hours per week which supports the statements regarding the necessity of reducing the burden of required paperwork. However, the survey found the average of reported time spent in direct contact with clients was 31 hours per week.

Case management definitions vary widely based on the intended target populations; however, there is general agreement on the types of activities involved in case management: assessment, planning, linking, monitoring and outreach. Various models of case management may elaborate or intermix these activities to provide for the specific needs of the intended recipients. Most case management models were originally designed as a result of the deinstitutionalization of people with mental disabilities in the 1960s and as such may not be completely transferable to addressing other chronic diseases. However, there is evidence of some successful diffusion of some models in HIV care settings that may merit examination for systems in Texas. With regard to issues of certification or licensure, there is evidence that case manager certification is associated with improved service delivery. However, case managers as individuals may hold various certifications and each should be considered to determine validity and applicability. There was no evidence found on the effects of licensure and service outcomes.

Ryan White Legislation

First enacted in 1990, the Ryan White CARE Act provides HIV related care to individuals who lack sufficient financial resources to cope with HIV disease. To date, Congress has reauthorized Ryan White legislation three times since the original enactment. Each reauthorization has brought changes in program requirements, necessitating adjustments to program implementation.

The Ryan White program has five distinct funding streams, or Parts. Part A funds eligible metropolitan areas and transitional grant areas as defined by the legislation. Grants to states under Part B provide medical care and other services to people living with HIV/AIDS. Part C funds service providers to implement early intervention programs. Part D grants are direct to service providers to fund programs targeting women, infants, children and youths.

The 2006 reauthorization created the Ryan White Treatment Modernization Act (RWTMA). RWTMA dictated major changes in how programs deliver HIV related services, both medical and non medical.

RWTMA defines 13 services as core medical services and requires that Part A, B and C grantees expend 75% of funds within those 13 categories. These services are Outpatient and Ambulatory Health Services, AIDS Drug Assistance Program, AIDS Pharmaceutical Assistance, Oral Health Care, Early Intervention Services, Health Insurance Premium and Cost Sharing Assistance, Home Health Care, Medical Nutritional Therapy, Hospice Services, Home and Community Based Health Services, Mental Health Services, Substance Abuse Outpatient Care, Medical Case Management – Including Treatment Adherence Services (Sec. 2612(b)(3)(A)-(M)).

Before RWTMA, the Health Resources and Services Administration HIV/AIDS Bureau identified 6 core services which included the broad case management category and did not distinguish between medical case management and psychosocial case management. The shift in emphasis to medical case management and medical services in general that occurred with the enactment of RWTMA comes as a result of HIV disease being considered a chronic manageable disease. In response to this shift, Ryan White programs across the country are implementing changes to case management systems.

Ryan White Services in Texas

The Case Manager is often the gate keeper to all services within the Texas HIV case management system. In other words, for a client to receive any service, he or she must first see a case manager and establish eligibility. In most cases, clients are required to maintain this relationship in order to continue getting services.

From September 2007 through August 2008, 30,111 clients received services through a Ryan White provider. Of the clients who received services, 75% or 22,426, also received case management. Across all funding streams, Texas allocates just over \$13 million to case management.

Community-based organizations, AIDS service organizations, medical clinics and local health departments deliver case management services. Once seen by a case manager, clients are encouraged and assisted to receive regular medical and dental care with a provider who has HIV/AIDS expertise. These providers may be in private practice, in a university health system, part of a local health department or contracted to come into a case management facility on a rotating schedule in order for patients to receive care. The physicians usually have qualified nursing staff and/or mid-level providers available to assist clients with concerns when they are unavailable.

Clients may receive a variety of services through the Ryan White HIV program. Clients have access to HIV medical specialists as well as preventative medicine and treatment for STDs. Case managers offer support services to assist clients with social issues that may pose barriers to seeing a medical specialist and taking prescribed medications. These services include: access to food through vouchers and referrals to food banks, access to transportation through gas vouchers, bus passes, transportation by staff, and access to stable housing through referral to Housing Opportunities for People with AIDS (HOPWA). In addition to assisting to stabilize clients' social situation, clients can access medications through the Texas HIV Medication Program, or receive other help through insurance assistance, co-payment assistance or applying for pharmaceutical free medication programs.

Case managers also assess clients for mental health and substance abuse issues, with referral to other providers as appropriate. Assistance with nutrition is also available. HIV-positive individuals can have difficulty taking medications, and have weight loss or weight redistribution or malnourishment because of the disease. Access to a dietician and supplements are offered when necessary.

Regular medical care and correct adherence to prescribed medications are the best means to maintain the health of persons who suffer from the chronic disease HIV. The ultimate goal in offering the above services is to get and keep clients in regular medical care with a physician who specializes in care for clients who are HIV positive.

Part One:
Review of Current Literature on Case Management

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Medical Case Management Literature Review

The purpose of this literature review is to present a thorough assessment of the current literature regarding case management, its medical and social outcomes, and the effects of case manager certification on those outcomes. A search of the literature was conducted using PubMed and Google Scholar (see Appendix C for search terms).

Since its emergence over thirty years ago, case management has been a critical strategy for providing medical services to vulnerable populations. While case management traditionally focused on mental health issues, the practice has expanded to include chronic diseases such as HIV/AIDS. Over time, case management has also expanded to include the provision of social services, counseling, and assistance with medical costs.

I. Definition/Description of Case Management

Purpose & Objectives of Case Management

The purpose of case management is to provide clients with continuity of care by assisting them in developing effective and comprehensive networks to meet their needs now and in the future. This is accomplished by promoting the coordination of human services, opportunities, and benefits (Aleman, 1997). Case management is intended to help patients with chronic diseases survive and optimize their adjustment in the community (Bjorkman & Hansson, 2000) through ensuring appropriate individualized medical plans, encouraging adherence to medication regimens, linking clients to appropriate services, increasing access to services, and coordinating the range of services needed to meet the client's needs (Chernesky & Grube, 2000).

One of the goals of case management is to maximize community-based care while minimizing inpatient care and associated costs. Case management is intended to bring coherence to service delivery and to enhance the client's quality of life (Grube & Chernesky, 2001). This practice aims to provide the necessary client services while maintaining quality care in a cost-effective manner (Tahan, 1998). Other goals of case management include providing quality of care along a continuum, reducing fragmentation of services, and increasing quality of life for patients (Allen & Medurna, 1999). The practice of case management seeks to manage services needed by patients, assure appropriate resource utilization, enhance the quality of care, and facilitate cost-effective patient outcomes (Tahan, 1999).

Intagliata (1982) describes five possible goals of case management, including enhancing the continuity of care; providing access to cross-sectional services delivery that is comprehensive, coordinated, and ongoing; enhancing accessibility by overcoming administrative barriers; enhancing accountability by designation of a case manager as the single point of responsibility for assuring the overall effectiveness of the system; and enhancing efficiency by increasing the likelihood of clients receiving timely delivery of appropriate services.

Definition of Case Management

There is no widely agreed upon definition of case management. The meaning behind this practice varies depending upon the model of case management being utilized. While the definitions of case management may differ, there has been some agreement on the tasks and activities involved in the practice of case management. The Case Management Society of America (CMSA, 2007) describes case

management as “a collaborative process of assessment, planning, facilitation, and advocacy for options and services to meet an individual’s health needs through communication and available resources,” and has noted four key functions of a case manager: assessor, planner, facilitator, and advocate (Case Management Society of America, 2007). The Case Management Society of America’s (2007) definition is very broad as they represent many different disciplines within case management. The American Nurses Credentialing Center has defined case management as a “dynamic and systematic collaborative approach to providing and coordinating healthcare services to a defined population. It is a participative process to identify and facilitate options and services for meeting individual’s health needs, while decreasing fragmentation and duplication of care and enhancing quality, cost-effective clinical outcomes” (American Nurses Credentialing Center, 2008). The Joint Commission on the Accreditation of Healthcare Organizations has listed five functions of case management: assessment, planning, linking, monitoring, and advocating (Johnson & Rubin, 1983).

H.A. Tahan (1999) identified six activities to be performed by case managers. The first of these activities is case finding or referral which can be described as identifying clients in need of case management services. Next, case managers perform screening and intake tasks followed by a needs identification and assessment. The fourth activity that case managers are responsible for is planning care activities and establishing expected outcomes. After a care plan has been established, case managers implement the plan through coordinating patient care activities. Lastly, case managers monitor and assess client care activities and evaluate outcomes. The last step of the case management process is ongoing and may result in changes to the client care plan (Tahan, 1999). D. Huber (2002) also identified six core functions or basic activities of case management, regardless of discipline, assessment, planning, linking, monitoring, advocacy, and outreach (Huber, 2002).

Case management involves the coordination of medical and social services into one system in order to meet client needs. This includes physical treatment, family and social relationships, and basic survival needs (Rosen & Teesson, 2002). Case management has also been described as a process which implements, coordinates, monitors, and evaluates services to meet an individual’s health needs in order to promote quality cost-effective outcomes (Aliotta, 1996). Case managers perform several interrelated tasks in order to serve their clients. These tasks involve counseling, outreach activities, advocacy, coordination of services, assessment of needs, intervention planning, crisis intervention, and brokerage of services (Bjorkman & Hansson, 2000). A study conducted at two urban and three rural facilities found that case managers spend the majority of their time engaged in reassessment of client needs, case conferencing, care plan formulation, and follow-up and referrals of clients (Abramowitz, Obten, & Cohen, 1998).

Case Management vs. Disease Management

Case management and disease management are sometimes used interchangeably, but the two practices are not the same. It is important to understand the differences between these two practices in order to identify the type of services a client is receiving. Disease management is defined as a population based approach to identifying persons at risk, implementing detailed programs of care, measuring outcomes of interest, and achieving continuous quality improvement (Kalina, Haag, & Tourigian, 2004). Disease management has also been described as an organized, proactive, multi-component approach to healthcare delivery that involves all members of a population with a specific disease entity such as diabetes. Care is focused on and integrated across 1) the entire spectrum of the disease and its complications; 2) the prevention of comorbid conditions; and 3) the relevant aspects of the delivery system. The goal is to improve short- and long-term health or economic outcomes or both in the entire population with the disease. The essential components of disease management are 1) the identification

of the population with the disease or a subset with specific characteristics (e.g., cardiovascular disease risk factors); 2) guidelines or performance standards for care; 3) management of identified people; and 4) information systems for tracking and monitoring. Additional interventions can be incorporated that focus on the patient or population, the provider, or the healthcare system or practice (Norris et al., 2002)

While case management and disease management share similar processes and common goals, the two practices differ in terms of focus, contact frequency, interactions, and care plans. As cited in one comparison of case management and disease management, case management focuses on individual clients with no specific condition or diagnosis whereas disease management focuses on a population of clients and is diagnosis driven. Clients involved in case management experience intense, focused contact with their case managers. This contact is episodic meaning that case managers and clients meet until the client has gained access to all necessary services and are controlling their disease. Disease management, on the other hand, is characterized by scheduled client-case manager contact every three to six months for the long term. The client, family, providers, vendor, and nonpar providers (nonparticipating providers of a health plan) interact with the case manager to develop a care plan for case management patients. Disease management interactions involve only the patient, their family, and the provider. In case management, the client care plan is flexible and individualized to meet all of the client's needs while the care plan utilized in disease management focuses only on clinical guidelines and indicators (McKay, 2005).

Simply stated, disease management functions are assessment through diagnostic testing, planning through clinical pathways/guidelines/indicators, and monitoring, whereas case management incorporates the added functions of linking and advocating.

Components of a Successful Case Management Program

C.A. Rapp (1998) conducted a research synthesis of mental health case management to identify the ingredients of a successful case management program. The term success is not defined within the article, however the implication is that success means less hospitalizations and greater achievement of client goals. In the analysis, only two models were examined, the assertive community treatment (ACT) and strengths based models. The author excluded the brokerage model, stating, "...the broker model has failed to produce results..." Effective case management requires a team structure for knowledge and resource sharing, case planning, and support, however it is noted that a team approach may be impractical in rural areas. Within the review, the evidence suggests that team delivered services are more successful in producing client outcomes than individually delivered services, but the consensus is that the team is needed for backup, support, and service planning ideas. Further evidence suggests that case managers can be selected from a broad pool of people with varying educational levels and backgrounds, but need high quality supervision from a well-versed professional and easy access to medical professionals and other experts. It is recommended that there is considerable pre-service and in-service training and ongoing technical assistance provided. The author notes the benefit of this staffing configuration in that it would be less expensive than requiring all case managers to be fully credentialed. While the caseload size per case manager should vary depending on the severity of cases and the client's geographical locations, the author posits that the client:case manager ratio should never exceed 20:1. Outcome reviews of the ACT model have noted a maximum caseload of 10:1, plus or minus 3 clients. Caseloads within the programs reviewed were of clients with severe mental health issues and have different medical and psychosocial needs than those living with HIV/AIDS. The authors caution about case load ratios and suggest tailoring the size of the caseload to the needs presented by the clients and the outcomes or benefits sought by the intervention. Case management services should be

ongoing and provided for an indefinite duration of time. Clients need to be contacted by case managers in vivo, meaning that case managers should travel to the client and office-based contacts should be limited. The frequency of contacts will vary depending on the client, but evidence suggests that the most effective case managers interact with their clients more regularly. It is important to note that the quality of the interactions between case managers and their clients is also a factor in effective case management. Services to clients should be provided directly from the case manager and referrals to traditional health programs need to be limited. Instead, case managers should utilize naturally occurring community-based resources (Rapp, 1998). Again, since the synthesis was of mental health case management research, the applicability of the components of a successful program to the case management of those living with HIV/AIDS is unknown.

Requirements of Effective Case Management

Structure

1. Team structure for the purpose of creative case planning, problem-solving, sharing knowledge of resources and support to team members
2. Team leaders/supervisors should be experienced, professionally trained mental health professionals
3. Case managers can be paraprofessional (e.g. B.A. level) but need access to specialists; involvement of nurses seems particularly important
4. Case load sizes vary based on client severity, geography, etc. but should never exceed 20:1. The average across program clients should probably be 12:1 to 15:1
5. Efforts should be made to enhance the continuity of relationship between the client and case manager
6. Clients need 24 hour, 7 days a week access to crisis and emergency services. That service should require access to staff who have familiarity and a relationship with the client (can be and perhaps should be the case manager)
7. Pre-service, in-service, and technical assistance should be available
8. Length of case management service should be indeterminate and expected to be on-going (although intensity at any point in time would vary)

Service

1. Case management contact with clients should be in-vivo (limit office-based contacts)
2. Frequency of in-vivo client contact will vary based on the client but should average across clients a minimum of six in person contacts per month. This should be supplemented by telephone and collateral contacts
3. Case managers should deliver as much of the “help” (e.g., modeling, resource acquisition, skill training, advice) directly as possible
4. Referrals to traditional mental health programs (e.g., partial hospitalization, day treatment, in-office counseling, sheltered and many transitional employment programs, congregate housing, etc.) should be avoided
5. The use of naturally occurring community resources (landlords, employers, coaches, neighbors, churches, friends, clubs, junior colleges, etc.) should be encouraged
6. Case managers should have ultimate responsibility for client services (with the exception of medication). They retain authority even in referral situations
7. Clients should be given equal or greater authority than case managers or other professionals in treatment and life decisions with the exception of hospitalization decisions

Table 1: Taken from Rapp, 1998, p. 377-378

According to S. Aliotta (1996), successful case management can be achieved by implementing four basic steps: 1) defining case management and organizational goals; 2) assessing organizational strengths and capacities; 3) identifying, assessing, and selecting patient cases; and 4) creating, monitoring, and evaluating outcome measures. In the most effective case management programs, case managers seek to intervene early in the clients' disease process and they strive for a low client volume with high level intensity. The case management approach should focus on strengthening the provider-patient relationship and supporting the case manager with adequate training and job orientation. An effective case management program is also proactive in identifying, assessing, and selecting patient cases. It provides continuous monitoring and assessment of outcomes and allows for revision of patient care plans as necessary (Aliotta, 1996). There is little research into the specific components of case management to which positive outcomes may be attributed. There is also little documentation of the critical ingredients in various case management models, with the exception of Assertive Community Treatment (ACT), which is the most widely evaluated and researched case management model. Because of the positive outcomes associated with the ACT model in demonstration projects, it caught on as a reimbursable service under many state Medicaid and other funding programs. Due to its prevalence in the mental health services field, research of the model has been more forthcoming than on other models of case management.

II. Case Management Models

Case management has developed in many disciplines resulting in many different models, structures, and definitions. D. Huber (2002) listed identified model groupings based in previous research. One grouping includes seven models of case management: 1) social; 2) primary care; 3) medical/social; 4) HMO; 5) independent; 6) insurance; and 7) in-house (intra-facility). Another grouping listed four models of: 1) the hospital model of discharge planning; 2) the traditional case management model; 3) the direct care model; and 4) the gap-filling model. A third grouping based on settings and types of services broke models in to: 1) clinical case management; 2) payer-based case management; 3) program case management; and 4) community case management. Huber (2002) breaks the models into four broad categories of social work, nursing, interdisciplinary, and health care. The social work grouping contains six common models of broker, primary therapist, interdisciplinary team, comprehensive, personal strengths, and rehabilitation. The healthcare model has nine common models of long-term care, rehabilitation, occupational health, medical (disease management), pharmacy, independent practice – private case management, insurance, gate-keeper (managed care), and catastrophic (including HIV/AIDS). The interdisciplinary grouping of models includes acute care case management for nurses and social workers, and a nurse – social worker collaboration in managed care (Huber, 2002).

With broad groupings of model types and an ever growing number of models, Hall et al.(2002) pointed out the problem with comparing the features of so many, “Thus, many programs are currently in operation, and although they were at one time based on a known or published case management model, agencies have tended to adapt case management models to more immediate local concerns. Unfortunately, this has made the comparison and evaluation of case management programs difficult” (Hall et al., 2002).

Dimensions for comparing and evaluating case management programs were established by Ridgely and Willenbring (1992), with Hall et al. (2002) adding the dimension “type of service.” Different models will vary in one or more of the dimensions making comparisons between models easier.

The 12 dimensions of case management create a basic framework on which to compare models, but also serve to specify the most fundamental aspects of a model. In an evaluation of mental health case management, Bryant and Bickman (1996) note, “... case management has been likened to a Rorschach test...; interpretation of the concept depends greatly upon individual perspective. Even when legislative mandates require case management, the states have considerable latitude in defining it... Brekke and Test (1992) noted that an explicit description is needed to determine if services are delivered as planned, to facilitate replication, to study the ‘critical ingredients’ of a model, and to compare varying program models” (Bryant & Bickman, 1996).

How is an evaluator to know if the ACT program being studied is actually providing the ACT service? A provider may choose a model, but implementation of a model can be subject to interpretation. The establishment of fidelity criteria allows an evaluator to determine if the case management being delivered is actually being provided according to a model’s specifications. Fidelity has been defined as conformity with prescribed elements and absence of non-prescribed elements (McGrew, Bond, Dietzen, & Slayers, 1994). Outcome evaluations of a particular model may be suspect if the service provided is not adhering to the model’s specifications. An evaluation of fidelity to a model is therefore paramount in measuring outcomes associated with a particular model. Evaluation of case management programs must document the extent to which planned activities are actually implemented (Bryant & Bickman, 1996).

Teague, Drake and Ackerson (1995) note that there are several uses for empirical measures of program implementation including components of evaluation during a program’s formation to shape the program toward model fidelity, as dosage or other process variables in non-experimental designs, and as a basis for developing criteria for inclusion or exclusion of a program in an experimental design (Teague, Drake, & Ackerson, 1995).

Two separate studies used similar processes to evaluate the fidelity of ACT programs. Teague, Drake, and Ackerson (1995) used clinician activity logs (range of activity on behalf of clients), agencies’ management information systems (utilization, and case load), agency documents (qualitative data on program implementation), and site visits (observations) and interviews (staff and supervisors). Bryant

Dimensions of case management models

- Duration
- Intensity – frequency of contact
- Case load – staff ratio
- Focus of service
- Type of service
- Availability
- Site of case management
- Consumer (client) direction
- Advocacy / Gatekeeper
- CM training
- Case management authority
- Case management team structure

Table 2: Taken from Hall, Carswell, Walsh, Huber, & Jampoler, 2002, p.135

and Bickman (1996) used questionnaires, naturalistic observation, chart reviews, and interviews in their evaluation of ACT program fidelity.

Many case management models have specifics in the 12 dimensions of case management, but are not necessarily fidelity criteria. ACT is one of the few models to have gone through a fidelity criteria development process as well as many evaluations of fidelity to the stated criteria.

Traditional Models of Case Management in Mental Health

The traditional models of case management were developed in the mental health field as a response to deinstitutionalization in the 1960s. As people were discharged from inpatient based psychiatric care back into the community, it was recognized that the previously admitted patients were still in need of many medical and social services to support their self-sufficiency in the community. None of the literature reviewed indicated the level of education, professional training, or licensure/certification needed to perform these types of case management.

Strengths Model: The strengths-based model is also known as the developmental-acquisition model of case management, and was developed as a response to the broker model's de-emphasis of personal strengths. In this model, the case manager focuses on the identification of the clients' strengths and securing the resources necessary for them to integrate into the community and improve their quality of life (Stanard, 1999). The goal of this model is to assist individuals in achieving their personal goals by helping them identify their strengths and then secure and sustain the resources necessary to live interdependently within the community (Huber, 2002). This model builds upon the outcomes desired by the individual and encourages the case manager to assess the situation before developing an intervention based on the possibilities. The strengths model of case management is based upon the belief that individuals have the ability to grow and learn, and that interventions should be client-driven (Berg-Wagner & Tebb, 1998).

The strengths-based model is based upon six principles: 1) the focus is on the client and their potential to be independent rather than the disease itself; 2) the case manager-client relationship is essential; 3) interventions are based on the client's self-determination and focus on client desired outcomes; 4) the community is not an obstacle, rather a place full of resources; 5) aggressive outreach is the preferred mode of intervention; and 6) individuals have the capacity to grow, learn, and change (Stanard, 1999). Studies have shown that this model of case management has been effective in producing positive results among quality of life outcomes such as improved independent living, high client satisfaction, and reduced hospitalization rates (Salfi & Joshi, 2003).

The Rehabilitation Model: The rehabilitation model of case management is similar to the strengths-based model of case management. Both models emphasize the importance of providing services based on the clients' desires and goals (Mueser, Bond, Drake, & Resnick, 1998). In both of these models, case managers identify the clients' strengths and design a care plan aimed at utilizing their strengths to facilitate independent living. The rehabilitation model, however, expands this concept to include the assessment of clients' skill deficits and incorporating remedies to those deficits into the care plan (Stanard, 1999). Instrumental and affiliative skills are addressed in order to promote community tenure and attainment of personal goals (Mueser, Bond, Drake, & Resnick, 1998).

Assertive Community Treatment: Assertive community treatment (ACT) is a model of case management that typically serves highly and continuously disabled populations. It was developed to create a hospital without walls within the community, in other words, utilizing community resources in

place of inpatient services allowing someone to live within the community rather than a residential care facility (McDonel et al., 1997). Assertive Community Treatment is designed as a self-contained multidisciplinary treatment team that spends 75 percent of staff time in the field providing direct services (Meyer & Morrissey, 2007). ACT programs have aspired to a common set of principles, including a problem solving approach in which staff attend to specific life issues, no matter their seriousness or relevance; provision of most services directly rather than referral; a team approach, outreach staff meet almost daily and share responsibility for outreach to every client on the case load; and a long-term commitment to clients, no matter how long they need the service (McGrew & Bond, 1995). Services are implemented in the client's home or the community rather than in an office setting. A multi-disciplinary team delivers services with the primary priority being support for daily living. The ACT model requires a low patient to staff ratio, often cited in literature as a client to staff ratio of 10:1 with little variance in caseload, and caseloads are shared among clinicians. There should be 24-hour coverage and time-unlimited service. Most services provided in the ACT model are provided directly instead of being brokered out. There is a high level of outreach to clients, and frequently 24-hour coverage is offered. Unlike the strengths model, there is little consumer or client input into care planning (Mueser, Bond, Drake, & Resnick, 1998). Services that are provided in the assertive community treatment model include: linking clients to medication services, helping clients cope with symptoms and solve problems in daily living, teaching community living skills, supporting housing problems, tracking Social Security and housing applications, advocating on behalf of clients for accessible benefits, monitoring medication, providing money management, and assisting with transportation and finding employment (Morse et al., 1997). Descriptions of both ACT and strengths models use teams of generalists with consultation by medical professionals and other experts as needed. The strengths model sees B.A. or B.S.W. level case managers as adequate. In three strengths model studies, the case managers were undergraduate or graduate students in social work (Rapp, 1998). In a survey of ACT case managers rating the most important ingredients of the ACT model, the highest rated component was having a nurse on the team. The next highest rated components were team involvement in both hospital admission and discharge decisions, shared caseloads for treatment planning, and small caseloads for each team. The most important clinical activity rated was medication management. The next highest rated clinical activities were continuing assessment, regular home visits, and provision of problem solving support. The analysis did not find any significant differences between urban and rural case managers (McGrew, Pescosolido, & Wright, 2003). Modifications to the ACT model have been made for deployment in rural areas, such as smaller teams, forming teams with a smaller range of specialized skills, and providing less intensive services. However, there is little evidence that these modifications will produce the same positive outcomes as a high-fidelity ACT program (Meyer & Morrissey, 2007).

Intensive Case Management: The intensive care case management model was designed to meet the needs of high service users. Similar to ACT, a multi-disciplinary team delivers services to clients and care is delivered for as long as it is needed. This model employs a low patient to staff ratio, often 10:1, and crisis intervention services are available 24-hours a day, seven days a week. Intensive care case management differs from ACT in that caseloads are not shared among clinicians, and services are delivered in both the patients' environment and the office setting. Again, there is little consumer or client input into the care planning process, even though the model is very client focused (Mueser, Bond, Drake, & Resnick, 1998). Intensive case management involves assertive outreach, assessment of client needs, and coordination of care; however, there are features that depart from ACT. Intensive case management is a brokered service designed to help those with severe mental illness improve their integration in the community by linking them with treatment providers. As noted in one study comparing the efficacy of ACT and intensive case management for rural areas, some indicate that

intensive case management may be better suited for rural areas because of individual case loads, fewer staff, less intensive contacts, and brokered services (Meyer & Morrissey, 2007).

The case management provided follows the path of assessment to identify needs, problems (potential and actual), and strengths, using standardized instruments in the approach. In the specific intervention described, Patient Care Management, the case manager identifies the resources a patient will require to successfully comply with a treatment plan, and clusters those resources around the patient to achieve the best possible outcome. Patients receiving this form of case management receive information and education regarding diagnosis and symptoms, etiology, treatment and stress, medication, symptom management, legal and occupational aspects, and practical daily living skills. Clients may be discharged from the case management program when the problem that brought them in is resolved or controlled, such as when case management is not proving to be effective, and situations when the care plan can be successfully accomplished through usual care by the primary care team. However, true intensive case management mimics ACT in that service is time unlimited. Patients for this case management intervention were identified through hospital records, and targeted patients that were either chronically ill, or catastrophically ill or injured (high risk/high use patients). Because of the level of medical acuity involved and the setting for this intervention, nurses were used as the case managers. The authors note that the goal of case management is not the medical management of the patient, but the coordination and supportive development of a plan to ensure the effective implementation of the medical treatment plan (Aliotta, 1995).

AID Atlanta, an ASO in the Atlanta area, used an integrated case management model for medical care and social support during the early 1990s. The model is the only description thus far that divides clients by acuity. During medical intake, clients are assessed by a case manager for their need of case management services and are placed in one of the following categories: (1) brief contact, one-time assistance; (2) low need, clients not in crisis, but wishing to use services; and (3) high need, clients in crisis. It is the high needs clients that receive the intensive case management. Immediate needs are addressed at the intake and then clients are assigned to a case manager based on their acuity and specific presenting problems. The model was modified by AID Atlanta in that care plans are developed in conjunction with the client, placing value on active participation by the client. Traditional intensive case management service planning utilizes little client input; however, the ICM model was developed for those with severe mental illness, thus patients may not be able to make appropriate choices in care planning. The interaction between case manager and high needs clients is described as a partnership that entails continual assessment of client needs, addressing needs through linking clients with services, and providing continual assessment and follow up. The authors do not describe the educational level, preference for certification or licensure, or other aspects of the case manager role, but do emphasize the integration of a registered nurse or nurse practitioner as part of the case management team, serving as a resource for the case managers (Sowell & Meadows, 1994).

The Generalist Model: In the generalist model, case managers assess the clients' needs and create a treatment plan that consists of the case manager's perceived client needs. The important concept to note with this model of case management is that patient care plans are designed based on needs as perceived by the case manager rather than needs identified by the patient, mimicking ACT or intensive care case management in that there is little direction of the care plan by clients. Clients are then linked to appropriate services to meet those needs. This service can be provided in an office setting or in the community. There is a large staff to client ratio, typically 1 case manager per 20 to 40 clients. (Stanard, 1999).

Health Care System Models

The following models have been grouped together based on the setting in which the patient receives care. The health care system models include approaches to case management that utilize nurses, physicians, hospitals, and primary care offices.

Nurse Case Management: There are three categories of nursing case management: disease specific, individual, and rural community based approaches to provision of care. There are also four components of the nursing case management system that surround the different approaches to the practice: role function, tools and technology, processes, and services. Nursing case management takes place within the three levels of prevention (primary, secondary, and tertiary) which guide the case manager in designing and implementing their plan of care. The plan of care for nursing case management systems emphasizes achievement of optimum health and prevention of disease. When developing the care plan, there are six outcomes that need to be addressed: financial, clinical, functional well being, satisfaction, quality, and humanistic. For nursing case management to be effective, the outcomes must be addressed at each level of prevention using all of the components of nursing case management. (See Figure 1)

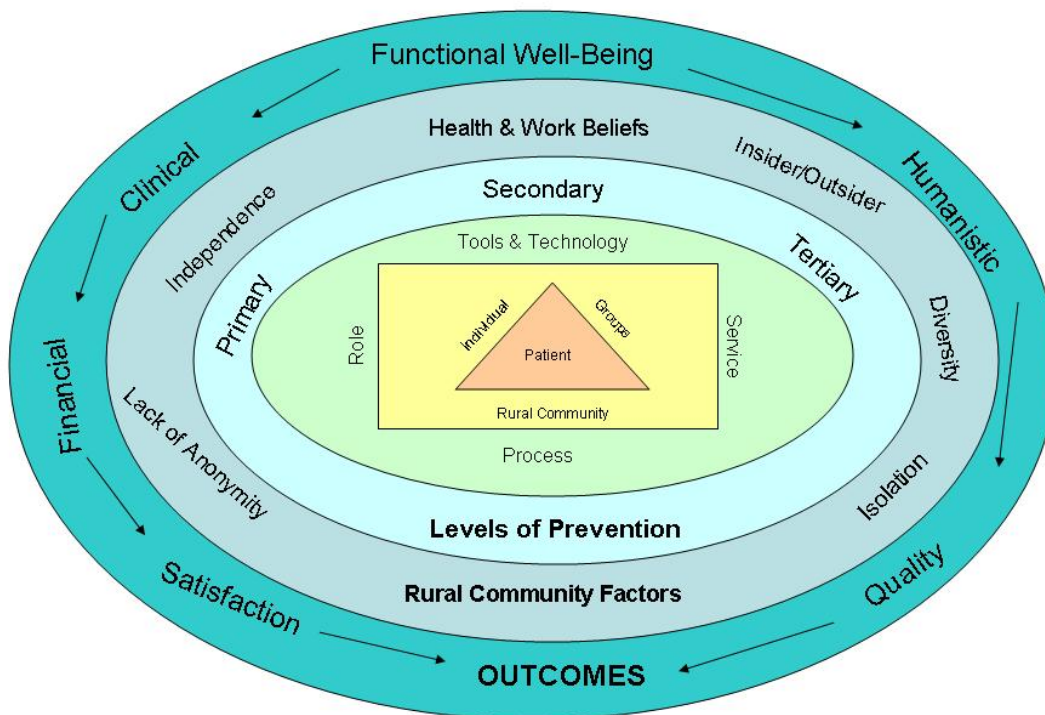


Figure 1: Nurse Case Management Model; taken from Stanton & Packa, 2001

In nursing case management, the client is the central focus of all activities. The nurse case manager is responsible for coordinating health care by organizing and monitoring. Within the nurse case management rural practice model, the nurse case managers expand on the components of the nursing process to provide a systematic framework for designing a system of care that includes clients, groups, and/or communities. This process includes five dimensions: assessment, planning, implementation, evaluation, and interaction (Stanton & Packa, 2001). As stated earlier, the American Nurses

Credentialing Center has defined case management as a “dynamic and systematic collaborative approach to providing and coordinating healthcare services to a defined population. It is a participative process to identify and facilitate options and services for meeting individual’s health needs, while decreasing fragmentation and duplication of care and enhancing quality, cost-effective clinical outcomes” (American Nurses Credentialing Center). Nursing case management utilizes registered nurses for development, monitoring, and evaluation of the care plan, including medical and psychosocial aspects. Licensed vocational nurses/licensed practical nurses are not utilized, as they are typically delegated tasks by the registered nurse or medical care team. This model combines the methods of the brokerage model, referring or brokering some services out, while some services are provided directly by the nurse.

The Star case management model, a sub-type of the nurse case management model, characterizes the roles of the nurse case manager, using the fundamentals of the nursing practice, including health promotion, prevention, disability limitation, and rehabilitation. Three of the star points represent the functions of interpretation, advocacy, and surveillance. Interpretation is the act of the case manager translating health information in a way that can be easily understood and acted on by the client and family. Advocacy is advocating for optimal care. Surveillance is the act of monitoring expenditures and utilization of services provided, as well as monitoring progress toward goals identified in the care plan. A successful nurse case manager needs to be able to apply all three of these to the care plan in order to lead to an optimal client outcome.

This model recognizes the relationship between client, payer, and provider, but includes a third triadic relationship, family, insurance, and doctor. Adding this third dimension acknowledges the impact of family on treatment. Nursing case management encompasses the physical, psychosocial, environmental, and value systems of the client. Incorporating these components into the care plan will help the case manager and client identify strengths and resources. While developing a care plan, the nurse serves to encourage the client to take an active role in their health care (Glettler & Leen, 1996). (See Figure 2)

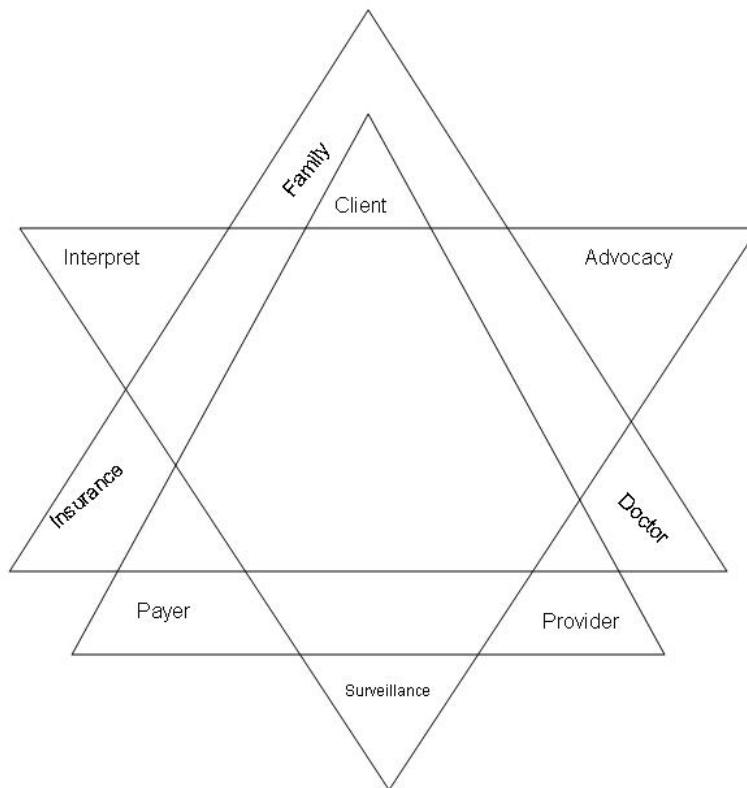


Figure 2: Star Model; taken from Glettler & Leen, 1996

Physician Practice Model: Case management within a physician’s practice has been described as a service delivery strategy that expands the physician’s focus to include the biomedical, psychosocial, and contextual aspects of client care. In this model of case management, case managers and patients develop a relationship and facilitate service delivery before more intense services become necessary. Physicians identify patients as “high-risk” and then a nurse case management team conducts an in-home assessment. The patient is then assigned to one or more members of the team for ongoing case management services. Case managers serve as a liaison between the physician and the patient by providing ongoing monitoring of patient status, medications, and compliance with physician orders. When necessary, the case manager refers the patient back to the physician for further assessment and treatment and accompanies patients to the physician’s office as needed. This model of case management is very similar to the brokerage model of case management. For the intervention, a nurse and two master level social workers provided case management; each had at least two years of experience. The program was designed with input from physicians, identifying areas in which case management could support their work with the elderly, the target population of the intervention. The case managers monitored patient health status, compliance with physician orders, and arranged community resources, such as transportation to the physician’s office. The care plan is developed in cooperation with the client, family/caregivers, physicians, and case managers. Those not in need of active case management were contacted by phone on a quarterly basis to assess any changes in status and to determine possible need for intervention at a later time. For those in active case management, the case managers would send a one-page care summary each month to the attending physician for inclusion in the patient’s chart (Anker-Unnever, & Netting, 1995).

Primary Care Case Management: This model of case management pays providers on a fee-for-service basis but assigns Medicaid beneficiaries to gatekeeper providers who must make referrals for specialty, emergency, and inpatient care. Primary care case management (PCCM) was designed to increase the use of primary and preventative care in physician offices and decrease use of specialty and urgent care. This model is designed to reduce a patient's barriers to care by changing the way physicians practice and their referral patterns. These reductions in the patient's barriers to care have the potential to improve the timeliness, quality, continuity, and appropriateness of services and lower the overall costs of care (Adams, Bronstein, & Florence, 2006).

Prior Authorization Screening Model, Interrogative Case Management Model: In the prior authorization screening model of case management, the health care provider, i.e. physician, determines whether alternative services are necessary and arranges for the substitution of such services for the client. The health care provider acts as a case manager developing a care plan. The Interrogative case management model emphasizes intense oversight of the clinical and financial aspects of providing services. While the patient's needs may dictate the services appropriate for their treatment regimen, the cost of care is recognized as a major factor in decision making. The focus of this model is to provide as many services as possible for the lowest cost. This model addresses quality through the variable of cost (Long, 2002).

Social Worker Case Management Models

Social worker case management models were grouped together based on their utilization of a non-health care provider as a case manager.

Brokerage Model: Many different models of case management are derived from the brokerage model and influence many case management practices. The brokerage model has been widely reviewed in the literature, with extensive documentation of outcome evaluations. The brokerage model employs a non-caregiver health professional to assess the changing needs of the client and to arrange for services to be provided by other providers in an office setting (Long, 2002). The brokerage model was developed as a result of the deinstitutionalization of patients with severe mental illness. The model was created as a strategy to connect clients to necessary treatment and rehabilitation services. The role of broker case manager became more complex and case managers recognized the need for more clinical skills to effectively engage and assess patients, and selectively intervene and refer them to treatment, which led to the development of the clinical case management model. One deficiency with the brokerage model noted by Mueser Bond, Drake, and Resnick, is that case managers are expected to connect patients with needed clinical services without themselves acting as clinicians. The problem is that it is assumed that clinical skills are not needed to provide effective case management and that a provider can always be identified. In this model, the case manager's responsibility is to evaluate the client's needs and to connect the client with the necessary services to meet those needs. The case manager acts as a coordinator of services between different providers. There are five functions of the broker case manager: 1) assessment; 2) planning; 3) linking to services; 4) monitoring; and 5) advocacy (Mueser, Bond, Drake, & Resnick, 1998). One of the reasons for the popularity of the broker model is that the case managers can be used as gatekeepers, or a point to control costs. Broker case managers have high caseloads and limited interaction with the people they serve beyond the basic activities of assessment, linking, and referral. These are attractive qualities when attempting to control costs, as fewer case managers need to be hired and less time is required of them, freeing them for additional tasks around the office. The broker model focuses primarily on the coordinating and rationing of formal service

delivery. Salfi and Joshi (2003) predicted that in the future, broker case managers would be allocated a bank of units of service for their caseloads for the year. The authors further note that the problem or crisis based approach inherent in the broker model can increase dependency and learned helplessness by reducing the decision making of clients (Salfi & Joshi, 2003).

The premise for this model of case management is that clients will receive the necessary level of care from community providers because the case manager can vary the mix and frequency of services for each patient (Morse et al., 1997). The primary goal of brokerage case management is to increase the likelihood that clients will receive the right services, in the proper sequence, and in a timely manner (Huber, 2002). Referenced by Mueser, Bond, Drake, and Resnick's previous research documented the challenges of case managers in rural areas, noting that it had become clear that there is no community care model that is equally appropriate across all service settings. The resources and characteristics of rural communities place different demands on service systems compared to urban communities. Because of smaller caseloads, rural case management teams typically are smaller, have less frequent staff meetings, and have less crisis coverage than urban counterparts (Santos et al., 1993; McDonel et al., 1997).

Clinical case management was developed as an offshoot of the brokerage model due to the recognition within the mental health case management community that case managers must often act as clinicians by providing direct services. Four broad service areas are encompassed by clinical case management: 1) initial phase (engagement, assessment, planning); 2) environmental interventions (linkage with community resources, consultation with families and other caregivers, maintenance and expansion of social networks, collaboration with physicians and hospitals, advocacy); 3) patient interventions (intermittent individual psychotherapy, training in independent living skills, patient psychoeducation); and 4) patient-environmental interventions (crisis intervention, monitoring). Although the clinical activities may also be practiced in the brokerage model to varying degrees, the clinical case management model is explicit in expectations that case managers are clinicians with skills in psychoeducation and psychotherapy (Lamb, 1980).

Community Care Model

Program feature	Broker case management	Clinical case management	Strengths	Rehabilitation	Assertive community treatment	Intensive case management
Staff to patient ratio	1:50 (?)	1:30 +	1:20 – 30	1:20 – 30	1:10	1:10
Outreach to patients	Low	Low	Moderate	Moderate	High	High
Shared caseload	No	No	No	No	Yes	No
24-Hour coverage	No	No	No	No	Often	Often
Consumer input	No	Low	High	High	Low	Low
Emphasis on skills training	No	Low	Moderate	High	Moderate (?)	Moderate (?)
Frequency of patient contacts	Low	Moderate	Moderate	Moderate	High	High
Locus of contacts	Clinic	Clinic	Community	Clinic/ Community	Community	Community
Integration of treatment	Low	Moderate	Low (?)	Low (?)	High	High (?)
Direct service provision	Low	Moderate	Moderate	Moderate	High	High
Target population	SMI	SMI	SMI	SMI	SMI High service users	SMI High service users

Note: (?) = area of model that is unclear; SMI = severely mentally ill.

Table 3: Features of different community care models; taken from Mueser, Bond, Drake, & Resnick, 1998, p. 40

Dimensional Characteristics of Case Management

Dimension	Pole A	Pole B	PACT	Managed Care	ICM
Duration	Indefinite	Time limited	Indefinite	As needed (minimal)	Up to 1 year
Intensity – frequency of contact	Frequent (daily contact)	Infrequent (quarterly contact)	Frequent	As needed (minimal)	Mixed (weekly to monthly)
Case load – staff ratio	Low (1:10)	High (1:75)	Low (between 1:5 and 1:15)	Very high	Mid range (1:15 intense services; 1:30 minimal services)
Focus of service	Broad; inclusive	Narrow; exclusive	Broad	Narrow (one discipline)	Broadly defined
Type of service	Provides all services	Management of services provided by others	Provides most services as treatment team	Management and control of services provided by others	Primarily manage services provided by others
Availability	24 hours	Office hours	24 hours	24 hours	Work days and evenings
Site of case management	In vivo	Office only	In vivo and office	Telephone	Mixed (office & community)
Consumer (client) direction	Consumer directed	Professionally directed	Professionally directed	Professionally directed (by funding entity)	Client directed goal setting, planning, and attainment
Advocacy / gatekeeper	Advocates for client (to gain access to services)	Gatekeeper for system (finds alternatives to requested services)	Mixed	Gatekeeper	Advocates for client
Case manager training	Advanced professional degree	On-the-job training	Professional degree	Professional degree	Master's degree in social work or other health profession
Case management authority	Broad authority, administrative control	No authority, persuasion only	Broad authority within PACT team	Full financial authority	No authority, persuasion only
Case management team structure	Full team mode: all case managers share all clients	Primary case manager with individual case load	Full multidisciplinary treatment team mode	Individual case load	Individual case loads/team supervision

Table 4: Taken from Hall, Carswell, Walsh, Huber, & Jampoler, 2002, p.135

Socio-medical Model: This model of case management employs a non-health care provider to serve as a broker of services. They are given the responsibility of coordinating a comprehensive set of services. While the focus is on providing a complete set of services, it is assumed that the least expensive services will be utilized where available (Long, 2002).

Patient Advocacy Model: The patient advocacy model emphasizes that all of the patient's circumstances be considered when making a decision regarding a treatment plan. The treatment regimen is determined not only by the medical needs of the client, but also by the psychological, social, and financial situation of the patient. This model addresses quality of care through the benefit variable and focuses on the coordination of a wide variety of services in an effort to improve quality of care (Long, 2002).

Consolidated Model: The consolidated model of case management is a combination of the interrogative model (or prior authorization screening model, listed under health care system models because case management is provided by the health care provider) and the patient advocacy model. In this model, a multidisciplinary team of providers assesses the changing needs of clients and provides the services. Multiple providers combine to form a team which then agrees upon the decisions of providing additional or alternative services to the patient. The resulting treatment plan can therefore be considered a product of the team consensus. Their decision can represent any point along the continuum from interrogative case management to the patient advocacy case management approach (Long, 2002, p. 55).

Setting-Based Models of Case Management: Rural and Urban Models

Rural Models: Vermont and Iowa: In the Vermont model of case management, the majority of the responsibility for services belongs to the specialist who works closely with a regional provider and clinic team. This model concentrates the care of HIV patients to a single clinic situated in each quadrant of the state (four total). Each clinic team is composed of a nurse practitioner; hospital based social worker; client consultant; community-based social worker from the local AIDS service organization; and an infectious disease (ID) specialist from the university. At these clinics, the ID specialist integrates medical care, psychosocial case management, and teaching. Education is provided to all regional providers who are encouraged to collaborate with the clinics for client care. The clinics form alliances among medical and mental health providers, non-governmental agencies, hospitals, the state health department, and patients to ensure that the clients' needs are being met to the fullest extent possible. All new patients are referred to both the clinic social workers and the client consultant for psychosocial assessment and community support. The assessment by the hospital social worker includes past and current psychiatric illness, past and current drug and alcohol use, housing needs, medical insurance issues, assistance with the state ADAP, and support for family and friends. The client consultant case management includes assistance with housing, transportation, support groups, medical insurance, and risk reduction education. In this model of case management, the ID specialist travels from their clinic setting to the patient instead of requiring the patient to travel long distances to the specialist; in other words, the specialist travels to one of the four regional clinics to see patients, rather than all clients across the state coming to the main clinical setting of the specialist. The nurse case manager is performing many of the coordinating tasks of medical care and case management. The Vermont model is more a model of medical care and case management integration rather than strictly a case management model. Development and implementation of the entire model was a four-year process (Grace et al., 1999).

The Iowa model of case management is another model that focuses on providing services to rural communities. The model was developed to provide support for drug abuse treatment rehabilitation.

This model is based on traditional social work and health care problem solving philosophy and incorporates facets of solution focused therapy. Solution focused therapy emphasizes working with concrete behaviors and clearly stated goals, rather than focusing on feelings or vague or undefined outcomes. The Iowa model consists of six primary activities: 1) Orientation to the Iowa Case Management Model: The case manager meets with the client during an initial interview to explain the case management process and ideology. They explain the expectations of the program and have the client sign a case management contract. 2) Assessment: The case manager engages in outreach to help clients develop and achieve goals. During this activity, the case manager and the client both identify personal strengths, successes, and formal and informal resources available to the client. The case manager and the client independently rate the client's strengths and then compare their ratings. This process leads to the development of goals. 3) Solution Planning: As part of this activity, the client and the case manager develop an individual solution plan focusing on the client's goals and aspirations. The process of developing the plan requires the case manager to help the client identify high-risk situations and other situations that are not likely to result in positive outcomes. The solutions to handling these situations are included in the client's plan. 4) Referral: This activity emerges from the client's individual plan and results in the case manager referring the client to resources identified during the assessment process. 5) Transitional Case Management Orientation: The focus of this phase is on increasing independence for the client. This activity is characterized by more client directed communication. 6) Self-Directed Case Management Orientation and Review: This final activity in the Iowa Case Management Model serves as the final conclusion of work done together. When this activity is completed, the client will be solely responsible for goal planning, problem solving and managing their own illness. This activity is a time for review of the case management process and client goals, celebration of accomplishments, and a time for planning for the future. The goal of this model is to create change in client behavior, feelings, and thinking in a truly collaborative relationship. In the development phase, the program designers set down six specific goals and outcomes: 1) clients will cease drug use; 2) clients will improve their health, mental health, legal status, occupational status, and other key areas of their lives; 3) clients will develop new areas of interest in their lives and develop better relationships with others in their social network; 4) clients will lead more fulfilling lives, learning to see themselves as competent and having strengths to build on; 5) clients will develop positively oriented goals and work with their case managers to put into operation solution plans to achieve these goals; and 6) clients will learn problem-solving and solution-planning techniques to undertake future work on their own (Hall, et al., 2002).

Urban Model: San Francisco: The San Francisco model of case management is an urban, hospital-based model aimed at addressing HIV infection. This model was developed early in the epidemic, 1980s, to manage the care of people living with HIV/AIDS across providers, utilizing appropriate and cost-effective resources. Volunteer case-advocates often assisted clients when formal case managers were overloaded. In the late 80s, the case management system changed from an informal arrangement among providers to a model more closely representing hospital discharge planning, focusing on acute needs. It was noted that in the future, the case management model would become more centralized, as evidenced by a demonstration project of case management that focused on service subsidies and data collection than traditional case management. The authors note at the time of writing, that the model of case management is transforming into a brokerage model of case management (Benjamin, Lee, & Solkowitz, 1988). More specific descriptions of the San Francisco General Hospital care team indicate that the clinic is staffed with an oncologist, an infectious disease specialist, nurses, and social workers to provide both inpatient and outpatient services. This model has been tested and proven effective in several urban areas, but has not been adopted to be utilized in rural communities (Grace et al., 1999).

Focused-Centered Models of Case Management

Focused-centered models are those models of case management that utilize peers, family members, or the community to help clients manage their illness.

Peer-based Case Management: Peer modeling case management is a “people-changing” activity in which the case manager is the change agent rather than the facilitator of change to bring about a desired goal or outcome. This model expands upon the already established functions of case management including outreach, assessment, care planning, service linkage, monitoring, and advocacy to involve peer-led skill based training activities. In order for this model to be effective, it relies upon a group-generated healthful norm to encourage and support the desired behavior changes in the client. There is a triadic relationship between client, case manager, and peer group (Albrecht & Peters, 1997).

Project Dulce, a program designed to improve diabetes care in underinsured patients, combines nurse case management and a peer education component. In this program, individuals with diabetes who have exemplified traits of a natural leader were selected and trained in the Project Dulce curriculum. After meeting established competencies, these peer educators were allowed to teach classes of their own. They provided the classes on the streets in the communities where they live and developed a triadic relationship between the client, the peer case manager, and the peer group. These classes consisted of interactive sessions to discuss personal experiences and visual demonstrations. The peer educators were familiar with the health care system and encouraged patients to return to their providers for more information regarding diabetes management. The use of peer educators increased participant belief in their control over their health (Phillis-Tsimikas et al., 2004).

Community-based Case Management: This model of case management organizes professional nurse case managers into a network to broker services. It uses case managers to follow the movement of clients who have been identified as high-risk from acute care settings to the community. Case managers are responsible for clients with chronic health problems, and the relationship is long-term (Huber, 2002). A study of community focused case management in congestive heart failure patients followed patients beginning when they were discharged. A multidisciplinary team of nursing, physical therapy, nutrition, and respiratory therapy used care maps to manage patient care. Within 72 hours of leaving the health care facility, a nurse case manager calls the patient to determine whether they have been able to carry out the agreed upon plan of care. The nurse case manager discusses diet, medications, and changes in health status with the patient. The telephone calls are accompanied by home visits by the nurse case manager where extra support and encouragement is provided. The community-based care management program was designed to help patients learn how to manage their disease at home and to prevent readmission to the hospital. The role of the nurse case manager in the community is to coordinate and advocate for the patient, extending the relationship outside of the hospital, and placing an emphasis on wellness. The intervention protocol required a nurse case manager with at least a baccalaureate degree, but master’s degree was preferred. The authors do not indicate the reasons for the educational requirements / preferences. There are three major components of the position: mentor, clinical expert, and advocate. (Ball & Peruzzi, 1997).

Other Models of Case Management

Medicare Case Management: Medicare case management is conducted by R.N.s in the client’s home. It is intended to serve those at risk for not receiving continuous services and therefore at a greater risk for increased health care utilization. This form of case management is a program of skilled interventions reimbursed by Medicare for its homebound patients, usually through a home health program. There are

four categories of services performed on the home visits: 1) skilled observation or assessment of physical, psychological, social, and environmental status; 2) skilled “hands on” intervention activities such as medication administration through injections, venipuncture, wound care, ostomy care, and other medical care that must be performed by an R.N.; 3) skilled teaching and training in the way of instructions to the patient and/or caregivers for self management; and 4) management and evaluation of the patient care plan. Each service may be provided alone or as part of a combination with any of the other services (Allen, 1999). This model of case management provides for the continuous care of patients identified as high-risk for rehospitalization who can benefit from a nurse assuring that the care plan is developed and maintained (Allen, 1999).

III. Medical Outcomes of Case Management

Disease Outcomes

The most prominent outcomes discussed in case management literature are disease or symptom related outcomes. These are also known as clinical outcomes and can be described as issues like morbidity, mortality, symptom relief and complications (Aliotta, 2000). A meta-analysis of mental health case management literature, comparing ACT and clinical case management to usual care found improvements symptoms, fewer hospital days used, a smaller proportion of clients hospitalized, more contacts with both mental health and other services, lower dropout rates from mental health services, greater improvements in level of social functioning, greater client and family satisfaction with care, less family burden of care, and lower total cost of care. It is important to note that the studies included in this literature review may vary in terms of case management and usual care. Many usual care programs have incorporated components of case management. The authors also caution that publication bias is a potential confounding factor (Ziguras & Stuart, 2000).

Case management has been proven to be effective in improving glycemic control among diabetic patients. In a study conducted among high-risk patients receiving case management by a clinical pharmacist, those individuals receiving case management services showed a decrease in their HbA_{1c} levels by a mean of 2.1 percent compared to the control groups’ mean decrease of 0.9 percent. The pharmacist followed up on disease management and medication management protocols approved by the primary care physicians. This allowed the pharmacist to be part of the medical care team. Patients had an initial assessment of medication management and were provided self-management education and skills training. The pharmacist contacted patients once a month by phone, unless patients needed more frequent assessment. The pharmacist also saw patients when they came to the clinic. Despite these results, the study was limited by its small number of participants who were patients at a single university affiliated clinic. Forty-one patients were enrolled in the intervention at study start time and 36 still enrolled at year-end follow up. While no case management model was explicitly stated, the features of the intervention are similar to clinical case management. The intervention was not a referral-based program, rather the pharmacist was integrated directly into the clinic, not the norm, where contact with patients and physicians were possible (Choe et al., 2005).

An intervention designed to decrease HbA_{1c} levels and fasting blood glucose levels among diabetic patients also showed improvements in disease outcomes. Diabetic patients in a nurse case management program had a mean decrease of 1.7 percentage points of HbA_{1c} values and 43 mg/dL in fasting glucose levels while patients who received usual care had mean decreases of 0.6 percentage points in HbA_{1c} values and 15 mg/dL in fasting glucose levels. This change in glycemic control was accompanied by improved self-reported health status in the nurse case management group. Although there were significant changes in HbA_{1c} and fasting glucose levels, case management was not associated with a change in medication type or dose, body weight, blood pressure, or lipids. The nurse case

manager is a registered nurse and certified diabetes educator. The nurse case manager performed an initial assessment of patients and gave instructions on blood glucose monitoring schedules. Patients would return two weeks later, during which time the nurse case manager looked at the blood glucose log and explained the treatment plan. Patients had in-person follow up with the nurse case manager on a quarterly basis, but patients were called weekly if on insulin, and every two weeks if using oral treatment. During the phone calls, patients discussed the blood glucose log and values with the nurse case manager. The nurse case manager was able to use their clinical knowledge to make adjustments in medication regimen as needed. Also during the phone calls, the nurse case manager would reinforce meal planning and exercise. Every two weeks the nurse case manager would meet with the primary care physician and endocrinologist to discuss patient progress, medication adjustments, and other issues. Any medication adjustments made were communicated to the patient's primary care physician soon after adjustment. The nurse case manager carried a caseload of 71 patients during the intervention. While this study monitored changes for both Type I and Type II diabetic patients, only a small number of Type I patients were included in the study. Several of these patients were lost to follow-up, which may bias the results of the study (Aubert et al., 1998). A systematic review of the literature on the effectiveness of case management and disease management for people with diabetes also found that both of these interventions result in improved glycemic control among diabetics. Some of the literature reviewed was deficient in methodology and the effects of specific components of the interventions on long-term health and quality of life outcomes (Noris et al., 2002).

Research also supports the effectiveness of disease management in improving the clinical outcomes of HIV/AIDS infected individuals. Individuals who participated in a hospital led community based disease management program showed a 14% improvement in medication adherence, a 15% improvement in influenza and pneumococcal immunizations, and a 27% decline in perinatal transmission rates. This study was conducted in five towns based on a community needs assessment. The program introduced a database and clinical pathways to standardize care, and added a full-time nurse practitioner for data collection, monitoring, and coordination (Parry et al., 2004).

Another study found that case management with HIV-infected persons was associated with increased utilization of two-drug and three-drug antiretroviral regimens. This study also found an increase in treatment with protease inhibitors or non-nucleoside reverse transcriptase inhibitors. Other positive outcomes were found with less unmet need for income assistance, health insurance, home care, and emotional counseling. Conversely, case management was not significantly associated with utilization of ambulatory care, hospitalization, or emergency department. The results of this study are not generalizable to HIV infected persons who are not in care. It is also important to note that this study relied on self-report for several key variables. The analysis used data from the HIV Cost and Services Utilization Study, representing people living with HIV/AIDS all over the country; therefore one particular model of case management or license/certification could not be identified with the outcomes documented. Other confounding factors as noted by the authors include that case managers may help patients overcome fears of treatment initiation, may help with medication adherence, and may advocate to physicians to start patients on medication regimens (Katz et al., 2001).

Similarly, a study of HIV-infected individuals receiving community based case management services found improved antiretroviral adherence. Individuals in this study who received moderate or consistent case management also experienced a $\geq 50\%$ improvement in CD4 cell count. Moderate case management was defined as receiving case management services for more than 25% but less than 75% of the quarters in the study. Consistent case management was defined as receiving case management services for 75% or more of the quarters in the study. The participants in this study were HIV-infected

urban poor which may affect the ability to generalize results to larger populations. Another study limitation is the non-randomization of enrollment in case management. The same qualities that allowed participants to receive case management aided their increase in medication adherence. Patients with these qualities may have also been inadvertently recruited more aggressively. It is not possible to identify a specific model of case management in the analysis, since many were included, including brokerage and other models in which case managers provided direct services to clients. The authors further note that the study did not explore whether different models of case management would be more effective, nor did it compare case management to other interventions (Kushel et al., 2006).

Case management has also been proven to affect the clinical outcomes of other diseases or conditions such as heart failure, high cholesterol, and aging. The PhoenixCare Intervention provides intensive home-based case management by nurses to individuals with chronic obstructive pulmonary disease or chronic heart failure. The evaluation of outcomes for the intervention group found significantly better outcomes on self-management of illness, lower symptom distress, greater vitality, better physical functioning, and higher self-rated health than the randomized control subjects. Nurse case managers performed assessments at intake and regularly following intake. They developed new patient goals, supported patient decision-making, assessed psychological, spiritual, and emotional needs of the patient and family and made counseling referrals when required. The nurse case managers served as part of the medical care team in that they were in communication with the patient's primary care provider. The nurse case managers provided education, care planning, access to support services, medication regimen compliance evaluation, but also during periods of illness exacerbation they took an active role in assessing medical status and implementing interventions for symptom control. Caseloads were 30 – 35 patients. Those who conducted this study experienced difficulties in recruitment of eligible participants resulting in a smaller number of cases than originally planned. A total of 192 participants were assigned to either the case management group or the control group (Aiken et al., 2006).

A nurse case management program for patients with hypercholesterolemia found that significantly more patients who received case management services achieved lower low-density lipoprotein cholesterol levels compared to patients receiving usual care. The intervention group patients also showed improvements in dietary and exercise patterns. Due to the multiple components of the intervention, exercise, diet, and medications, it is difficult to conclude which components were most effective in producing these outcomes (Allen et al., 2002). For older patients living in a community home, case management was associated with better physical functioning. The activities of daily living scores for the intervention group improved to 13% versus 5.1% in the control population. Those patients who received case management services also showed a reduction in the decline of cognitive status. The results of this study may be limited in that the participants were living in a community home and the intervention was only conducted in one town in Italy (Bernabei et al., 1998). Case management has also been proven to improve immunization completion rates among inner-city, African American children. A randomized controlled trial of an in-home case management program found that immunization completion rates for individuals in the intervention group were 13.2 percentage points higher than the control group. This study was limited to inner-city African American participants served by one health service system. Other limitations of this study include reconstruction of a small percentage of immunization records through parent recall resulting in potential recall bias (Wood et al., 1998).

There is also data to support the outcomes of specific case management approaches rather than individual diseases. A meta-analysis of mental health case management literature comparing assertive community treatment and clinical case management found that both types of services were effective in reducing symptoms of illness, increasing clients' contact with services, reducing dropout rates,

improving social functioning, and increasing clients' satisfaction. Both types of case management had positive effects in the three outcome areas examined, family burden, family satisfaction, and cost of care. The authors do note that publication bias may be a confounding factor in the analysis (Ziguras, Stuart, & Jackson, 2002). A separate literature review conducted by Holloway, Oliver, Collins, and Carson (1995) found one study that presented clear evidence of the effect of assertive community treatment on client outcomes. The other studies they reviewed either reported no significant differences or the differences varied across measures. The majority of the studies they reviewed compared case management to traditional methods of care rather than comparing different models of case management (Holloway et al., 1995). When compared to usual care, the strengths model of case management did not produce any significantly different outcomes in terms of client symptoms. This study was conducted with thirty-two case management participants and fifteen control participants at two rural sites in Ohio (Stanard, 1999).

An analysis of mental health literature by Rapp (1998) found differences in outcomes between brokerage models of case management and ACT and strengths models. In reviewing previous meta-analyses, Rapp (1998) notes that brokerage models are heavily dependent on referrals, with an emphasis on mental health services. In the three meta-analyses reviewed, the author notes that poor outcomes were uniformly found. Rapp (1998) also states that the ACT and strengths models consistently found positive outcomes. In terms of caseload and client outcomes, Rapp (1998) notes that the ACT model suggests a client to case manager ratio of no greater than 10:1, and the strengths model suggests a client to case manager ratio of no greater than 20:1. Rapp (1998) adds that no study has found positive client outcomes of those two models with caseload ratios above 20:1. Because the outcome evaluations are only among mental health clients, caution is warranted in applying these caseload standards to other disease or condition specific case management. Rapp (1998) draws three general conclusions based on the analysis. First, frequency of case manager client contact rather than hours of contact makes a difference; the use of telephone-based contact may supplement, but not be a replacement. Second, frequency of contact and hospital outcomes will not be linear since those who are most ill will often receive the most contact but may also have higher rates of hospitalization. The third conclusion is that quality of contact, not just frequency, may be a mitigating factor. An example provided of a skill-deficit case manager with a small caseload making frequent contacts is probably not going to be effective. Citing previous research, Rapp (1998) notes that a brokerage model with small caseloads and significantly more contact did not produce any positive outcomes. Unfortunately the outcome measures are not stated (Rapp, 1998). In an analysis of brokerage and strengths models of case management, Salfi and Joshi (2003) describe findings from previous analyses indicating that broker models of case management had no positive outcome, and in some cases, led to increased hospitalization. The authors state that research suggests the broker model fails to produce benefits for clients or reduce costs or hospitalizations (Salfi & Joshi, 2003).

Mueser, Bond, Drake, and Resnick (1998) conducted a meta-analysis of several case management models, focusing mainly on the ACT and intensive case management models that had been implemented in a randomized controlled trial. Little research exists of randomized controlled trials of other community case management models. In the analysis, Mueser and colleagues (1998) found that the most consistent effects of the ACT and intensive case management models were related to reduced time spent in hospital and housing stability. In an analysis of ACT and ACT with community worker models compared to brokerage case management, ACT and ACT with community workers produced superior outcomes of number of contacts with treatment program, resource utilization, severity of thought disorder, acuity level, and client satisfaction than did outcomes based on the brokerage model.

The study however only looked at those with severe mental illness at risk of homelessness, and therefore results may not be widely generalizable (Morse et al., 1997).

Social Outcomes

Social outcomes are the combination of functional outcomes and satisfaction outcomes. This type of outcome includes the ability of the person to participate fully in the activities of life, their quality of life, satisfaction in life, and ability to have healthy relationships with friends and family members (Aliotta, 2000). Literature supports case management's role in creating this type of outcome for clients. When compared to patients receiving usual care, case management clients experience greater improvements in their level of social functioning, greater client and family satisfaction, and less family burden of care (Ziguras & Stuart, 2000). A review of outcome literature for case management reported improvements in quality of life and increased patient satisfaction with life for those patients receiving case management services. Case management has also resulted in a trend toward improved social functioning, improved social networks, and a wider range of social relationships for patients (Holloway et al., 1995). Individuals who have received assertive community treatment have reported better outcomes in accommodation status, employment, and satisfaction with services compared to those who received usual care. Both assertive case management and clinical case management have been proven effective in improving social functioning of clients and increasing patient and family satisfaction with services (Ziguras, Stuart, & Jackson, 2002). However, in the meta-analysis conducted by Mueser Bond, Drake, and Resnick (1998), it was noted that ACT and intensive case management had limited evidence of positive outcomes related to social functioning, as defined by the quality of social relationships, role functioning, or social networks (Mueser, Bond, Drake, & Resnick, 1998). A randomized controlled trial of the strengths based model of case management found improvements in vocational and educational outcomes for the experimental group versus the control group (Stanard, 1999). A study of HIV-infected persons found that case management was associated with decreased unmet needs, and a decreased need for emotional counseling. Participants in this study were not randomly assigned to a case manager and client reports of need were not objectively verified (Katz et al., 2000). The Phoenix Care Intervention for seriously chronically ill patients found that individuals involved in case management made better legal preparations for the end of life (Aiken et al., 2006).

Utilization Outcomes

Utilization outcomes include hospital admissions, inpatient days, emergency room visits, and seeking community services. Case management has been shown to result in fewer hospital days used, a smaller proportion of clients hospitalized, more contacts with community services, and lower drop-out rates from services (Ziguras & Stuart, 2000). Patients engaged in the case management practice experienced a fewer number and a shorter length of hospital admissions. There is also evidence to suggest that case management increases the use of and referral to community services (Holloway et al., 1995). Patients who receive assertive community treatment were found to be more likely to remain in contact with services, be admitted less, and spend less time in the hospital. This type of case management, as well as clinical case management, is effective at reducing the number of clients that drop-out from services. While both models of case management were shown to reduce hospital days, assertive community treatment was more effective (Ziguras, Stuart, & Jackson, 2002). While one study of the strengths based model of case management found a significant decrease in the use of inpatient days by the intervention group versus the control group (Bjorkman, Hansson, & Sandlund, 2002), another study of the same model found no significant differences in the number of hospital days or hospitalization rates between the intervention and control groups. This study may be limited by the small number of participants in both the case management and control groups (Stanard, 1999). According to Bjorkman, the findings of their study may be limited due to the number of comparisons that were made between groups.

Case management has been shown to produce positive utilization outcomes among patients with HIV. A study conducted at a health maintenance organization found that patients receiving case management services had more visits with nurse practitioners and nutritionists and fewer visits with primary care physicians. The same patients received more services from social workers and had fewer emergency room visits than patients who received usual care. The mean number of days intervention patients spent in the hospital decreased from 7.8 to 2.01 with the introduction of case management services. This study compared a case management group of 230 HIV-infected persons to a comparison group of 4747 HIV-positive health plan members receiving care within the same hospital system. The case management intervention was similar to nurse case management (Le et al., 1998). A higher proportion of HIV-infected persons receiving case management met with a HIV-clinician at least once in the past six months opposed to those receiving standard care. Approximately 78% of case management patients visited the clinician while only 60% of standard of care patients visited the clinician in the first six months. The same results are seen at twelve months with 64% of case management patients and 49% of standard of care patients visiting the clinician at least twice. This increase was seen in patients participating in a strengths-based case management intervention. The main outcome in this study, linkage to HIV care, was measured through self-report (Gardner et al., 2005).

The Primary Care Case Management program assesses the effects of case management on the utilization of primary care among children in Alabama and Georgia. The study found that case management was associated with lower primary care utilization rates for all children except non-Hispanic whites in urban Georgia. This type of case management was also associated with reduced utilization of preventative care among children in urban Alabama and increased preventative care among all children in rural Georgia. It is important to note that this intervention was designed to affect the utilization of care among children in both rural and urban areas. The intervention did not differ across settings and was the most effective in urban areas (Adams, Bronstein, & Florence, 2006). Case management in the Phoenix Care Intervention resulted in a greater awareness among patients of illness-related resources. However, this study was limited by the quality of hospital claims which could not be explored in depth (Aiken et al., 2006). For older patients living in a community, case management created later and less common hospital or nursing home admissions. According to the literature, the later or less common admission to nursing homes indicates that patients receiving case management services were able to live independently for a longer period of time. When utilizing these results, it is important to note that the intervention was conducted with individuals over the age of 65 who suffered from multiple geriatric conditions (Bernabei et al., 1998). Palliative care case management resulted in decreased use of hospital resources in the last sixty days of life by patients with cancer vs. individuals who did not receive palliative care case management. This study employed a non-randomized comparison between groups and may be influenced by biases in the referral process. The study may also be limited because some patients may have received care from non-VA sources and this data was not included in the study. Other limitations include data that was taken from a database, which may or may not contain all of the patients' medical history and a sixty day study period (Back, Li, & Sales, 2005).

A randomized, controlled trial of mentally ill people, some with and some without substance abuse diagnoses, assigned patients to case management interventions utilizing either intensive clinical case management or brokerage case management models. The authors found that neither model was successful in any of the measured outcomes for those that had dual diagnoses of mental illness and substance abuse. However, for those that had only a mental illness diagnosis, intensive case management was associated with greater increases in outpatient service use and less likely to be hospitalized at the end of the six month follow up period. Those in the brokerage model based

intervention did not show significant improvement. One drawback is the short follow up time period of only six months. However, the investigators did measure fidelity of the interventions to the stated models to ensure the case management provided was reflective of the major tenets of those models (Havassy, Shopshire, & Quigley, 2000).

Care/Management/Satisfaction Outcomes

A review of outcome literature for case management identified a trend in patients to prefer case management over usual care. High levels of satisfaction with case management services were reported (Holloway et al., 1995). Both assertive case management and clinical case management have been proven effective in increasing patient and family satisfaction with services (Ziguras, Stuart, & Jackson, 2002). In a randomized controlled trial of case management, significant improvement in quality of life over two years was observed. This outcome did not vary based on case management treatment conditions or by patient diagnosis. According to the literature, this study was conducted with 708 patients at four sites in the UK and patients were randomly assigned to the case management or control condition (Huxley, Evans, Burns, Fahy, & Green, 2001). Diabetic patients receiving case management services have also reported an increased satisfaction with their diabetes care (Krein et al., 2004). This increased satisfaction with services may be due to the improvement in pharmacists meeting the five process measures of diabetes with their patients: hemoglobin measurement, low-density lipoprotein measurement, retinal examination, urine albumin screen, and a foot examination. This intervention was conducted in a university-affiliated clinic in which the pharmacist was directly integrated into the clinical structure and had regular face-to-face contact with patients (Choe et al., 2005). Mueser and colleagues (1998) note that there is a moderate effect of ACT and intensive case management on quality of life, but that may be related to improvements in hospitalization and housing stability. The authors note moderate evidence toward greater satisfaction among clients, and to a lesser extent, family members (Mueser, Bond, Drake, & Resnick, 1998).

Economic Outcomes

In 2004, the Congressional Budget Office found no evidence to support that case management programs result in a reduction in health care spending. While their review of the literature found studies that addressed economic outcomes of case management, the results were limited due to the lack of generalizability to broader populations. The analysis includes a variety of case management models and other characteristics that may account for the lack of finding of positive economic outcomes (Office of Management and Budget, 2004). Other literature addressing the economic or financial outcomes of case management is varied. A review of the outcome literature found only three studies that reported a positive change in cost as a result of implementing case management services (Holloway et al., 1995). While the review found varied results, a meta-analysis of the effectiveness of case management found an overall lower total cost of care for clients participating in case management (Ziguras & Stuart, 2000). A study of HIV-infected persons receiving case management services found that the mean cost for HIV-related medications were lower for these patients than for patients in the same area who did not receive case management services (Le et al., 1998). However, a literature review conducted by Ofman et al. (2004) found few studies that evaluated the impact of case management on costs of health care utilization. While they did find a small number of studies that showed a reduction in costs, the decrease was small or inconsistent. Comparisons of the ACT and intensive case management models by Mueser Bond, Drake, and Resnick (1998) have found some savings, however, the authors note that ACT-like models are most effective when provided to patients that have a history of high service use and that the savings most likely result in the shift from hospital based care to less expensive community based care.

IV. Impact of Licensure/Certification of Case Managers on Outcomes

The literature regarding the required credentials of case managers focuses on certification rather than licensure. The process for certifying case managers was first developed in 1992 by the Commission for Case Manager Certification (CCMC). The CCMC was the first and is the largest nationally accredited organization that certifies case managers. This organization has validated the case manager certification exam through a surveying process, and as of 2001, has certified between 30,000 and 40,000 case managers. The survey of case managers found 81 percent of participants had a background in nursing. Forty-three percent had a bachelors degree, 22 percent an associates degree, 17 percent a masters degree, and 15 percent a high school diploma. Of those surveyed, 78 percent had the title of case manager. Eighteen percent worked in a hospital as their primary work site, and 16 percent at an independent case management site. The case manager certification exam consists of questions from six domains: process and relationships, health care management, community resources and support, service delivery, psychosocial intervention, and rehabilitation case management (Mullahy & Jensen, 2004). It is important to note that case managers as individuals may be certified by various organizations, and organizations or institutions may also be certified, a process known as accreditation. When an organization is accredited, that certification does not extend to the individuals working in the program that received the certification. Those individuals cannot assume or claim that they are covered by the organization's certification or accreditation (Tahan, 2005).

The National Association of Social Workers established standards of practice for social work case managers regarding education. The standards state that a social work case manager will have a baccalaureate or graduate degree from a social work program that is accredited by the Council on Social Work Education. The standard also prescribes a reasonable caseload that allows the case manager to effectively plan, provide, and evaluate case management tasks, but does not state an exact numerical caseload (Robbins & Birmingham, 2005). Nurse case managers also serve as brokers of clinical or psychosocial services needed by patients, compared with the brokerage of psychosocial services only by a social worker (Tahan, 1999).

The American Nurses Credentialing Center offers a certification in nursing case management. To be eligible to test for certification, a person must hold a current/active R.N. license in a U.S. state or territory, have practiced the equivalent of two years full time as a registered nurse, have a minimum of 2,000 hours of clinical practice in case management nursing within the last three years, and have completed 30 hours of continuing education in case management nursing within the last three years (ANCC, 2008). As noted by Stiller and Brown, the American Nurses Association recommends a baccalaureate in nursing and three years of appropriate clinical experience as the minimal amount of preparation for nursing case management. The authors also note that many case management programs prefer a master's level nurse who is a clinical specialist in the areas of the target population. The reasoning for the preferences of educational level and clinical specialty are that the individual would possess the research skills needed to investigate high risk clients' needs and the resources available (Stiller & Brown, 1996).

In a literature review by Genrich and Neatherlin (2001), 228 articles were reviewed, 124 in 1993 and 104 in 1998, to determine educational level and qualifications to serve as a case manager. According to the findings, most of the articles do not specify a minimum or preferred educational level. Of the few that did specify a level, a baccalaureate of nursing was the minimum level of preparation, with a preference towards those with a master's in nursing. The minimum number of years was not well addressed within the literature the authors reviewed, but it was found that clinical expertise was a requirement for adequate role implementation. The authors note, "Few articles are available that directly address

educational preparation other than those that focus on individual institution orientation programs for the CM” (Genrich & Neatherlin, 2001).

Value & Importance of Certification/Licensure

According to H.A. Tahan (2005), certification provides case managers with an opportunity to set themselves apart from others by indicating that they have achieved the educational background, experience, skills, knowledge, and competencies necessary to perform the multifaceted duties of a case manager. It also allows case managers to distinguish themselves as being able to perform these duties at a level above and beyond the minimum requirements. The case manager certification exam assures that individuals have achieved an advanced level of competence in the practice of case management and possess the knowledge, skills, and competencies required for the provision of safe and quality care. This, in turn, provides an opportunity for the public to develop a trust and faith in case managers and the services they provide (Tahan, 2005).

Research has shown that there is a growing trend in the number of agencies that require certification from their case managers as a qualification for employment. There is also some evidence of financial rewards and incentives for those case managers who have completed the certification process. Advocates of case manager certification assert that certification allows for better job opportunities for case managers and a common certification process encourages cooperation and understanding among colleagues (Tahan, 2005).

Effect of Certification/Licensure on Client and Outcome

Despite the rising number of agencies requiring certification, there is little to no research on the effects of a certified or licensed case manager versus a non-certified or non-licensed case manager on the medical outcomes of the client. The research that does exist regarding the certification of case managers focuses on the number of agencies requiring certification and the number of case managers being certified. There is also literature on the effects of certification of case managers on the types of jobs they obtain, their pay, and their ability to perform the job. Other research focuses on the content, validity, reliability, and usefulness of the case manager certification exam.

V. Discussion

There are several approaches to case management, however most are based on the five core functions of assessment, planning, linking, monitoring, and advocating. While newer models of case management are emerging, these models tend to be modified versions of the traditional models. Models differ in terms of case manager to client ratio, setting where services are delivered, and frequency of contact between the case manager and client. The models also differ depending on if services are delivered directly by the case manager or if they are brokered out through referrals. The work of Ridgely, Willenbring (1992) and Hall et al. (2002) created a framework around which case management models and their elements may be compared.

Positive outcomes have been seen as a result of many of these case management models. Rapp (1998) notes that case management models are a package of elements, and knowing which elements of a model contribute what to client outcomes is not possible when testing different models. It is important to keep in mind the reason for the case management intervention when selecting an outcome measure. An example is a case management program or case manager trying to reduce non-adherence to medications. An outcome measure of adherence would be appropriate for reporting (Aliotta, 2000). Case management by a clinical pharmacist, in-home case management, assertive community treatment, and clinical case management produced changes in disease symptoms. Assertive community treatment

and strengths-based case management have resulted in improvements in social functioning and utilization of health care services. Positive changes in utilization were also seen in primary care case management. Both assertive community treatment and clinical case management were shown to improve client satisfaction with services. The economic impact of case management is varied, with the majority of the reductions in cost being small and inconsistent. Based solely on outcomes, assertive community treatment seems to be the most effective model of case management. This model has been proven to show positive improvements in disease, social, utilization, and satisfaction outcomes. One possible reason for the positive outcomes in several areas is that this model of case management focuses primarily on the severely disabled. Since ACT has become a reimbursable service through state and federal programs, it is one of the most widely documented and researched models of case management. This may result in publication bias as an explanation for the plethora of documented positive outcomes.

There is a lack of literature to support that case manager certification results in improved client outcomes. The literature regarding case manager certification focuses on the benefits to the case manager and on specific aspects of the certification exam. There is not any consensus about the level of education, background, or licensure in the literature, if it is documented at all. While few articles discussed educational level or licensure, those that did either specified an R.N. or a B.A. level case manager, however there was little justification for the preferences stated. In describing case management systems, Tahan (1999) observes that there is no consensus in definitions on whether case management services are a care-based continuum, promoting continuity in care delivery, or whether a specific healthcare professional, such as a registered nurse, is necessary to coordinate services. The debate over qualifications is also not a new one. As stated in descriptions of the case management provided in San Francisco, "Considerable debate continues regarding another design issue: who should perform case management functions? Although everyone endorses a team approach in principle, participants differ in terms of their commitment to medical versus social case management models (usually in the form of nurse versus social worker) and in terms of the extent of professional training needed (i.e., bachelor or masters level)" (Benjamin, Lee, & Solkowitz, 1988).

With so many established models, and virtually limitless permutations of model elements, choosing or designing a model should focus on the recipients. "A more important goal than evaluating which model is best may be to determine which model is best for whom or to explore whether hybrid models can be developed to meet multiple needs currently addressed by different models" (Mueser, Bond, Drake, & Resnick, 1998). Designing a model of case management should first specify the critical components of the model. Second, operational definitions of those critical aspects should be well documented. Without this level of specificity, the service provided will be susceptible to 'program drift' (McGrew, Bond, Dietzen, & Salyers, 1994). Established clear standards begin to assure fidelity to a case management model.

**Part Two:
Jurisdictional Survey**

*National Part B
Texas Part A*

Jurisdictional Survey

National Part B and Texas Part A

In order to fully understand the state of current practice in case management, the project team embarked on a national survey of the other Part B jurisdictions. The project team viewed understanding how other states have structured and operationalized their systems of RW case management as an important step toward the goal of redesigning the Texas system; additionally, examining how these states problem-solved around common barriers might inform Texas on how to approach particular issues. Five jurisdictions were selected, based on their similarities to Texas: states with at least one eligible metropolitan area and/or transitional grant area (large and mid-size cities with high HIV morbidity), surrounded by an extensive rural area. The jurisdictions interviewed included California, Florida, Illinois, New York, Oregon and Washington.

The second arm of the jurisdictional survey involved interviewing the Texas Part A's (eligible metropolitan areas and transitional grant areas). These large and small city jurisdictions operate somewhat semi-autonomously from the State of Texas RW Part B jurisdiction. Conversing with these smaller jurisdictions within Texas, when paired with the survey of Texas Part B sites, provides a complete picture of current practice for RW case management in Texas. The jurisdictions surveyed were: San Antonio, Ft. Worth, Austin, Dallas and Houston.

In order to foster productive conversations and to create consistency, the project team established a list of common questions for use with all jurisdictions, both Part A and B. Questions were tailored to gain a better understanding of jurisdictional practice as well as recent changes implemented due to the Treatment Modernization Act. The following questions formed the base of the interview:

1. Does the jurisdiction deliver both case management and medical case management?
2. What is the distinction between these two types of case management?
3. How is a client's need for one or the other type of case management determined?
4. Do Medical Case Managers take care of social/non-medical needs?
5. What were the barriers to implementing Medical Case Management?
6. Is there a screening or assessment used in determining which type of case management a client receives?
7. Where are medical case managers located, in or out of clinic settings?
8. Describe the communication between the case manager and clinical staff
9. What is the background of the jurisdiction's case managers?
10. What are the minimum qualifications and training requirements for case managers?
11. Is it possible for a client to access services without a case manager?
12. Does the jurisdiction use a standard acuity scale? How is it used to determine level of client contact?
13. What is the caseload size for case management and medical case management?
14. How are clients discharged?

The information from the surveys follow on the next few pages, summarized by state (for the State jurisdictions) based on common themes, and into a chart format for the Texas Part A

jurisdictions. A full transcript of each call is available for review to completely understand the nature of the call and the systems in place in each state.

Overall, no changes were made to any case management system as a result of the Treatment Modernization Act (TMA). Changes made in Austin, Ft. Worth and Houston pre-date the TMA. Barriers encountered when making changes towards a medical focused model primarily centered on concerns about funding and changing the way people thought about case management.

California

California has a sophisticated case management system that is complicated by California's large size and multiple EMA areas. In addition, California has a robust Medi-Cal (California's version of Medicaid) system which allows clients access to several programs or forms of case management that are not available in Texas. One such service includes a process through which a nurse case manager and social work case manager coordinate care or refer the client to targeted case management.

Different levels of case management exist depending on client need, including early intervention and in-home care for advanced disease. However, all clients must be in some form of case management in order to qualify for Ryan White Part B services. Both medical and non-medical case management are available. Registered Nurses provide MCM and a LCSW, MFT or psychologist provide non-medical case management for some of the programs listed above. In other programs social case managers are not required to have a degree.

Clients may see the physician of their choice, with all case management services provided outside of the medical provider site. There are varying levels of coordination of care between case management and medical staff depending on a variety of factors. Acuity scales are used in California to determine who qualifies for different levels of case management programs. The different programs determine level of contact based on severity of illness or caseload size for case manager.

Florida

Florida currently has a system of case management that involves both medical and social services. The key differences in the two services revolve around follow-up and coordination of medical care and treatments. Florida is currently in the process of restructuring its case management system in conjunction with the local AIDS Education and Training Center. Florida's goal is to establish a system that clearly distinguishes medical case management from social case management but that would also allow current case management providers to continue to provide services without much upheaval to their staff. The model will stay very similar to its current process but with more emphasis on treatment adherence and staff trainings. Part of the restructuring process is to determine how staff conduct eligibility screening for either service. Presently, in order to access case management, clients enter a separate eligibility process conducted by non-case management staff. Communication with clinical providers is another area under evaluation.

Florida offers case management in both the clinical setting and in free-standing community based organizations. with the restructuring. Florida is not currently using an acuity scale. Their experience with scales has found them to be ineffective.

Illinois

Illinois considers all case management to be medical case management. Case managers assist clients in accessing and understanding both medical and psychosocial services with the ultimate goal of better health outcomes for all clients. Illinois is currently in the process of restructuring to ensure that staff understand the basic processes of case management and lay a good foundation for the system. The majority of case managers are located in local health departments and the medical services are located elsewhere within the community. Sites consult by phone with providers as needed, but there are no current requirements for contact between medical case managers and medical staff. Clients must access case management to access all services with the exception of AIDS Drug Assistance Program.

The state does make use of an acuity scale; however, Illinois utilizes it to determine case load size for each case manager, rather than to determine need for frequency of client contact.

Oregon

In 2000, Oregon made the decision to move their Ryan White system to a Nursing model. This was accomplished with input from stakeholders as well as experts from outside the Ryan White system. Oregon's case management program is closely tied to local health departments, as they have first right of refusal to take Ryan White funds. Public health nurses are used to go out into the community. Oregon is currently piloting a new project that focuses on a central location for clients to register for benefits and high acuity clients to be identified and linked with a nurse case manager. Currently all clients are required to have a nurse case manager; the idea with the new system is to allow the nurses to focus on medical issues. These issues can include: adherence and access to medications and medical services.

Oregon also has psychosocial case managers with varying backgrounds. The HOPWA program has its own set of case managers. Clients may be shared by various combinations of the three different sets of case managers. Oregon utilizes a gate kept system where any services must be obtained through a relationship with a case manager. Oregon is attempting to implement a new program that would allow clients the opportunity for independence through education about chronic care self management. This change is partially sought to improve the lack of standardization of case management delivery and lack of connection between case management care/services plans and the client's medical treatment plans.

All clients in Oregon have medical insurance through the state. All clients are assigned a nurse case manager. As the system is changed client acuity will be taken into account and only clients with high acuity will be assigned a nurse case manager. A standardized acuity scale is used to assess clients. This scale dictates contact level for both the nurse and the psychosocial case manager. Nurses were chosen as they were seen as critical when working with private doctors. Nurses will summarize their assessment in a letter to physicians outlining the priority needs of the client, how the nurse can help the client with those needs and what the nurse has asked the client to speak with the doctor about. Nurse case managers' role is very medically focused and a large portion of the role is to provide education specific to the disease and healthy living. The psychosocial case manager appears to focus more on referrals, advocacy and ongoing monitoring of the plan of care for the client.

New York

New York has two primary models of case management – comprehensive and supportive. Comprehensive is designed to serve clients with more complex needs and agree to an intensive level of service and is time limited. Supportive is responsive to immediate needs a person may have that may be solved over the short term or who have completed comprehensive case management but may need periodic support. In addition to these two models New York also has a program known as Medical Care Coordination and this is the only form of medical case management provided in this state. This care focuses on clinical services and is provided only in Designated AIDS Centers.

Currently no acuity system utilized; the supervisor determines level of need that clients may have.

Washington

Washington State sees its case management program as a range of client centered services that focus on assuring access to timely and coordinated medical care and medication with a secondary purpose of linking clients to other necessary services that will help them achieve their medical outcomes and is directly relatable to achievement of medical outcomes.

Washington State recently went through a process similar to Texas in evaluating its case management system. Through this evaluation, a Strengths Model perspective was adopted. Washington only utilizes Medical Case Management. There is no form of Non-medical (social) case management available. The Medical Case Manager is responsible for all activities, both social and medical. Some of the funded agencies have developed informational and referral programs to assist clients who do not require full case management but need minimal assistance. Clients are not required to have a case manager to access other Ryan White services.

Currently no Medical Case Management is offered inside of medical clinics. Some agencies do coordinate with medical staff, but not always. Washington State is looking at how to strengthen these relationships.

Washington does utilize a standard acuity scale. The acuity scale is used in order to determine whether a client needs medical case management or should just be referred for other services. Use of this acuity system has shown a reduction in wait times for clients to get case management. Acuity is documented at every encounter with clients and is used as a mechanism to demonstrate that a client no longer needs case management.

Summary of Texas Part A (EMA and TGA)

For full transcripts, please resource guide available at panel meeting location

	San Antonio	Dallas	Ft. Worth	Austin	Houston
Types of CM	Medical and Non-Medical	Medical and Non-Medical	Medical Only Funds additional positions: intake (eligibility) and insurance workers	Medical and Non-Medical	Medical and Non-Medical
Distinction Between Types	Distinction made at Planning Council level, rather than in contracts MCM works solely on medical needs N-MCM links people to care and services and takes care of social needs	EMA uses the HRSA definition as a foundation Distinction is based on setting: MCM is in the clinical setting, Non-medical isn't	All CM are MCM	Distinction based on setting and function: MCM in clinical setting, and provides specialty Care, ADAP and Medicaid N-MCM is in other settings, and provides some services considered to be MCM including assessments for mental health and substance use	Non-medical CM are termed service linkage workers
Setting	Agencies and Clinics with both Clinic with no CM	Clinics with MCM Agency with N-MCM Clinics with both	Agencies and clinics with MCM	Clinics with MCM Agencies with N-MCM	Clinics with both Agencies with N-MCM
Conferencing with Medical Team	Medical case manager works directly with medical team on medical needs Clinical based CM coordinate w/ Medical Team Appears no coordination for off-site case managers	RN, MD and medical case manager case conference regularly; the non-medical case manager also attends periodically	Clinic based CM conferences with Medical Team Some conferencing with the private physician where the MCM is not housed in a clinic	Medical case managers conference with the Medical Team on as-needed basis Future plans: monthly case conferencing and include the non-medical case manager	medical case managers conference with the Medical Team

Summary of Texas Part A (continued)

	San Antonio	Dallas	Ft. Worth	Austin	Houston
Training	Clinic conducts half-day training once monthly with invitations to all case managers	Contracted agencies and clinics are responsible for their own training	Ongoing training required – nothing specific	Training required for both; some trainings are provided	Training provided – 24 hrs of specific training required first year; 16 hrs every year after. staff can seek/use outside training after first year
Licensure/Background	MCM – Masters N-MCM – Bachelors	MCM – RN N-MCM – BSW (Parkland requires N-MCM have MSW)	None required, jurisdictions does provide recommendations	MCM – license preferred, must have background in SW or Nursing N-MCM – bachelors w/ license preferred, can substitute up to 2 years of experience in lieu of degree	MCM – LBSW or LMSW N-MCM – Bachelors in Behavioral sciences plus 1 year experience, or substitute experience for degree
Access to Care	Nothing specific	CM are gatekeepers to medical care	MCM is gatekeeper into system	1 clinic – must have initial intake, but ongoing CM not required 1 agency – CM is gatekeeper to system	Clients can access without case management
Acuity	Only 1 clinic uses acuity scale	Needs assessment dictates ct contact	No	Yes for N-MCM, No for MCM	No
Caseload	MCM ~ 50-60 N-MCM ~ 100	Caseload unknown but CM is assigned	Nothing specified	MCM – episodic, no defined caseload N-MCM ~ 43	Nothing specified Each client has MCM, PA and nutritionist.
Client Contact	Nothing specified	Based on needs Assessment/acuity	Nothing specified	Nothing specified	Brief assessment for high functioning clients; comprehensive assessment for complex clients Reassessed every 6 months

**Part Three:
Survey of Texas Part B Sites**

Introduction

The purpose of this site-based research project was to examine local Part B service providers throughout the DSHS-funded case management systems in Texas to gain a better understanding of the elements and issues within the current case management system. Four data sources (case management observations; chart reviews; case manager, client and supervisor interviews; and an online case management survey) provided the data for this project.

As the Texas Department of State Health Services (DSHS) seeks to operationalize medical case management, this portion of the project focused on the activities occurring in Texas. DSHS seeks a deeper understanding of current case management practices across the state in order to identify areas for improvement and to refine the practice of case management to improve client outcomes. Through the site-based research component, DSHS sought to determine why people generally access case management; how often the case management standards of care are being met; and, if there are significant differences between the case management provided in urban versus rural areas, free standing versus programs co-located with a medical clinic, or those offering non-medical case management only as opposed to those offering both medical and non-medical case management.

Sites selected for this project include community-based AIDS service organizations as well as facilities based out of medical or health care facilities, as clients are served through multiple models, sites and auspices throughout Texas. Organizations are based out of both urban and rural settings, each with their own challenges and barriers for clients. This report provides a background on the project's methodology, results, and a summary; and, presents two overall pictures of case management in Texas. The first is a thematic discussion centered on the various activities that occur in case management while looking across data sources. The second portion presents information within a data source, discussing all the activities and information gathered from within that source.

Executive Summary

This site-based review of case management services yielded information that will be used with an expert panel to identify areas for improvement and the best routes to do so. Despite the general consensus among case managers and supervisors that the goal of case management is to assist clients to be self sufficient, during the case manager and supervisor interviews, few were able to recall discharge of a client due to self sufficiency. Discharging a client due to moving or death were the only reasons recalled, suggesting clients that are perpetually in case management. Client acuity level, or the level of need for intense case management, was inconsistently defined by case managers within the same agency. In some agencies, one case manager defined nearly all their clients as high acuity, while another felt they were more medium or low acuity. It would be expected that acuity level may be reflective of the client to case manager ratio, however this was not the case.

General findings across this study found that HIV clients accessed care for assistance with medications, food, transportation and scheduling appointments. The other most frequent reason for contact between case managers and clients was to update their status.

An inconsistent picture is presented by several of the data sets that may indicate further investigation is necessary when it comes to whether or not the case management standards of care are being met. At first glance through case manager interviews and observations many of the case management standards

of care items are inquired about. But, a more thorough analysis of the data sets such as the chart review, the case management standards of care do not appear to be met. Analysis of chart review data by on-site reviewers revealed great concern over a lack of adherence to all Case Management Standards of Care. In fewer than half of the client charts were mental health, substance abuse, acuity level and behavioral risk screenings conducted during the review period. However, needs assessments were documented in over 90 percent of the charts. Likewise, not all charts contained plans of care and only 50 percent of the charts reviewed had plans of care that contained documentation that they were consistently followed. There could be many reasons for the inconsistencies found here that this study was unable to investigate.

Another question investigated if differences were found between different case management settings, i.e. rural vs. urban; stand-alone vs. co-located sites, differences in client to case manager ratio, etc. There were no consistent differences found where one setting characteristic always performed differently than the others. In fact, surprising results were sometimes found, such as the setting with the greatest client to case manager ratio was the site with the most plans of care in place.

Contact between HIV/AIDS clients and their case managers can be defined as supportive and positive. Client interviews revealed a general satisfaction with their case managers and the services they receive from the agency. Client contact with case managers tended to focus on repetitive reasons such as medication refills, monthly rental assistance, scheduling appointments, transportation, and updates between case manager and client. Frustrations were documented from clients, case managers, and supervisors over the lack of funding available. In the case manager interviews the most frequently expressed concern focused on the amount of required paperwork and the impact of this time devoted to administrative duties affected their ability to serve their clients. In turn, clients expressed a desire to see an increase in the contact and time they have with their case manager.

Methodology

In order to gain a better understanding of the case management process in part B service providers, this project used a process evaluation focus from program evaluation theory. Process evaluation focuses on questions such as if clients received the intended services, qualifications of staff, adherence to standards of care, barriers to implementing standards, client barriers, etc. To complete the analysis, four data sets were utilized:

1. Case management session observations;
2. Chart reviews;
3. Case manager, supervisor, and client interviews; and,
4. An online case management survey.

Study Components

Instrument design. Instruments for each of the four data sources (observations, chart reviews, interviews, and online) were developed between DSHS and BVCOG. Most questions were based on activities listed in the DSHS Case Management Standards of Care (Texas Department of State Health Services, 2007). A discussion of the requirements and expectations of case management guided the instrument design process. Activities and other components of case management identified in the literature review also guided question development.

Administration/data collection. The Center for Community Health Development (CCHD) was contracted to develop a data management component for the project in addition to completing the data analysis and providing a report. Data were collected by the HIV Administrative Services Division of the Brazos Valley Council of Governments (BVCOG) utilizing instruments developed by the Texas Department of State Health Services or via electronic recording (interviews only). Data were entered into two electronic formats – (1) hand collected data were transferred via BVCOG staff to a Microsoft Access database designed by CCHD; and, (2) recorded interviews were transcribed by BVCOG staff into Microsoft Word documents. Data elements include case manager – client observations, client chart reviews, interviews with Part B case managers, their supervisors, and clients, and an online survey. All identifiers were removed from the dataset prior to delivery to CCHD staff. For details on participant selection, see Appendix A.

Site Selection. Data were collected from a total of eight case management sites via a purposive sampling by the Texas Department of State Health Services between January and June 2008. The sites were based on a variety of factors including geographic location (urban vs. rural), case management services available at each site, region, site orientation, and number of clients served. Half of the sites sampled were drawn from rural areas (population of less than 100,000) with populations ranging from 26,000-57,000. Using the USDA Rural-Urban Continuum (RUC), selected sites are classified as RUC 1, 2, 3 and 5. A table explaining the Rural-Urban Continuum can be found in Appendix B.

All selected sites provided non-medical case management; six of the eight clinics also provided medical case management. Sites offering solely non-medical case management tended to be stand-alone sites, not connected to a medical/clinical facility (i.e. co-located).

The client base for the selected case management sites ranged from 60 to 683 clients with an average client base of 313. Sites retained a range of one to four case managers with no specific differences between clinic characteristics and number of case managers. There was a mean of three case managers per site. Using the number of case managers on staff and a clinic’s client base, a ratio of client load to case manager was calculated. The mean client to case manager ratio was 112:1 and the ratios ranged from 60:1 to a high of 227:1. However, it should be noted that the highest ratio of clients to case manager occurred in a clinic with a less traditional form of case management (responsibilities are rotated between case managers in lieu of each manager having a specified client load belonging only to them). Table 1 provides a summary of selected site characteristics.

Table 1: Selected Case Management Site Characteristics

	Number of Sites
Geographic Location	
Rural	4
Urban	4
RUC Classification	
1	1
2	3
3	2
4	0
5	2
Case Management Type	
Non-medical	3
Medical/Non-medical	5
Site Orientation	
Co-located	6
Stand-Alone	2
Number of Case Managers Employed	
1 Case Manager	1
2 Case Managers	3
3 Case Managers	2
4 Case Managers	2
Client Base	
<100	1
100-249	3
250-499	2
>500	2
Client to Case Manager Ratio	
<100:1	3
101:1 - 199:1	4
>200:1	1

Site-based Research Activities. While on site, research staff sought to observe as many case manager-client interactions as possible, with a minimum of five observations at each of the eight sites. Between case management sessions, research staff reviewed charts and interviewed case managers and supervisors. In the event that time did not permit, or if a case manager/supervisor was absent, the interviews were conducted by phone at a later date.

Data Analysis

Data captured by the BVCOG HIV Administrative Services staff was analyzed using a variety of methods including queries within Microsoft Access, Microsoft Excel worksheets, and SPSS statistical software. Due to the limited nature of the data, quantitative data analysis was limited to distribution and frequencies of responses. Transcripts of client interviews were broken down and entered into a Microsoft Excel file with worksheets designated to each question or sub-question. Additionally, qualitative response areas from other tools used in this project were also transferred to a Microsoft Excel file for interpretation. Responses were then recoded for consistency across similar responses. Final analysis grouped responses into themes for the thematic analysis reported in this document.

Limitations of Data

As with any research study, there are limitations related to the data collected. The primary limitation in this case is associated with data collection procedures for data collected through interviews and observation. Multiple interviewers conducted observations of case management sessions, chart reviews, and case manager/supervisor interviews at site visits. To help minimize potential discordance in data collection, the research staff discussed all the questions (observations, chart reviews, and interviews) and came to agreement on what each question meant and what was being looked for prior to data collection at the first site. While there was multiple staff each conducting observations, chart reviews, and interviews, the same staff performed those functions at each of the visited sites. The research staff underwent training on each of the instruments to ensure accuracy of interpretation and recording. Differing understandings of the interview protocols and concept definitions may have been an underlying issue for some inconsistencies found in the data. Another key issue was related to the structure of the instruments, as several items were unclear or contained double barreled questions. A third limitation pertains to client interviews. Clients self selected into the interview process, which may skew results versus a random sample. Despite these limitations, both the HIV Administrative staff and CCHD staff have collaborated in the analysis to ensure that it is as accurate and rigorous as possible.

Thematic Analysis

Looking at the data gathered across all data sources, a thematic analysis related to specific activities and expectations, based on the Case Management Standards of Care and HIV/AIDS core services, was conducted. This analysis focused on commonalities found regarding intake, mental health, substance abuse, medical care, oral health, medication/treatment adherence, behavior/risk assessment, and assessment of need/acuity.

Intake

According to the Case Management Standards of Care, client intake gathers data to determine eligibility for services, shares information about agency and other community resources, and completes required paperwork for assistance and services. As such, each agency has written policies and/or procedures regarding the intake process based on these standards, as well as paperwork and ARIES data entry associated with the individual components of the intake process. Supervisors and case managers alike

praised the Standards of Care for its potential to create consistency within agencies across the state. On the other hand, those interviewed did not always know specific requirements that are based on the Standards of Care document, e.g. number of visits required each year by clients.

During interviews, case managers were asked to detail the activities that take place and issues discussed with a new client entering services. Case managers generally lumped many components of the Standards of Care into a client meeting described as an intake (intake paperwork, needs assessment, care planning, and referral). This “intake” included:

- Intake paperwork,
- Needs assessment,
- Creating care plans,
- Education (i.e. health education, risk reduction, agency services and processes), and,
- Referrals for medical evaluation, lab work, and/or other services in the community.

Nearly one-third of the case managers interviewed also described their first meetings with a new client as an opportunity to establish credibility and rapport, as well as providing a general feeling of support. Assessments, as described by case managers, used a variety of tools to gather information about the client’s social and medical history, financial needs, housing situation, behavioral risks, mental health and substance abuse, and acuity. Assessment tools varied from ARIES assessments and intake forms, formal screening tools for mental health and substance abuse, and agency created forms.

The most commonly mentioned referrals for new clients were medical services, mental health, and dental care during case manager interviews. The chart review reflected similar referrals with referrals to medical care and drug assistance as the most frequently referred to sources. Following medical care issues, access to food services/pantry was the second most frequent referrals found, although the chart review encompassed 13 months of client activity, not simply referrals for new clients who need to establish a medical care provider and care plan.

In the case management agency survey, respondents described the role of case management from three distinct perspectives: 1) Client focused: the role of case managers is to assist clients in meeting their needs and helping them achieve independence; 2) Population focused: the role of case managers is to assure access to services and prevent transmission of HIV; and 3) Agency focused: the role of the case manager is to provide services professionally, effectively, and on time.

Case manager interviews stated main goals of case management to support clients, assist them in accessing services and living a “normal” life. Accessing services (including financial support) cannot be done without paperwork. It is the management of paperwork and data entry that case managers and supervisors considered “administrative duties,” a task considered cumbersome and time consuming by a majority. Supervisors did not report as much time per week spent on paperwork as did their case managers. In smaller client base clinics where there were fewer case managers, supervisor reported paperwork as the main administrative duty. On the other hand, when asked to describe a typical day, over half of the case managers interviewed reported spending their day working on paperwork, charting and/or data entry. Many case managers also cited arranging for financial assistance (financial, medication, food pantry, housing, etc) took a significant portion of their day. An average of 50 percent of their time was reported as spent on administrative activities (ranging from 25%-85%).

When asked how to improve case management, responses resembled an intricately woven web – increase funding, hire more staff, reduce caseloads, more client contact. As one of these strands in the

web of case management is touched, through their connectedness, other areas are impacted - one agency cannot hire more staff without increased funding; case loads cannot be reduced without additional staff; more time for patients cannot be created without a smaller caseload; and so on. Many case managers provided a simple, yet not easily accomplished, response to improve case management – reduce paperwork. Suggestions for reducing paperwork included standardizing tools across agencies, better communication across agencies, consolidate documentation, and eliminate redundancies.

Discharge of a client was rarely cited by case managers as a regularly occurring activity. If clients were discharged, case managers cited reasons for discharge that included no longer needing or wanting services, moving out of the area, losing contact for periods of time greater than six months, behavioral issues, or death. Few case managers interviewed cited self sufficiency as a reason for discharge from services, despite case managers citing client independence and/or self sufficiency as a goal of case management services.

Mental health

Mental health care services are considered a core service that is standard to the care of an HIV/AIDS client. Among other core services such as ambulatory outpatient medical care, substance abuse services, oral health care, and others, standards of care require that mental health needs are, at a minimum, screened annually. With just over three-quarters of the counties in Texas designated as rural, it is not surprising that 68% of Texas counties have been designated by the U.S. Department of Health and Human Services as Mental Health Health Professional Shortage Areas. Such designations make referral to mental health services are often hard to follow through on based on the distance a client must travel due to their location in relation to the location of the nearest mental health professional. Case management facilities in urban areas are more easily able to assist their clients in accessing mental health services since health services are more likely to be congregated in more urban areas.

Based on the Case Management Standards of Care, case management agencies that completed the online survey all reported screening their clients for mental health issues at least once per year; 60 percent of agencies screen once annually, and 24 percent screen twice annually (the maximum number reported was four). While considerable variation exists in the types of instruments employed to conduct screening, the most used tool is the Substance Abuse and Mental Illness Symptoms Screener (SAMISS); 37.5 percent of agencies reported using SAMISS. Other instruments in use include in-house developed tools, the PHQ9P, and the Family Assessment and Acuity Scale.

Case managers interviewed reported that the mental health needs of their clients was identified by talking with their clients informally during sessions – general discussion of client’s health and medications used or needed and client medical history. When asked what formal tool was used, if any, most case managers used some type of assessment tool. Tools reported were usually defined as an “agency form/intake form,” mental health “screening,” substance abuse “screening,” or more specifically the ARIES intake form. When the clients were asked if their case manager had discussed with them getting assistance with mental health issues, half of those interviewed (50.0%) said “yes,” and the most common outcome reported of those discussions was a referral to a counselor or psychiatrist. While half of the clients interviewed reported discussing mental health with their case manager, only one-quarter of the observed case management sessions documented that mental health needs were assessed or discussed, and similarly only 23 percent of the chart reviews indicated mental health screenings; even fewer provided any education regarding mental health needs or services available or referrals. Only one percent of the clients whose charts were reviewed received mental health services

during the review period; although reviewers did provide notation of several instances where mental health services referrals were provided to clients with no indicated or obvious need.

Substance abuse

Substance abuse service needs are another core service that should be screened for on a yearly basis, or more frequently if needed. Almost all case management agencies surveyed (96.0%) reported screening clients for substance abuse at least once annually. Fifty-six percent of agencies screen for substance abuse issues once per year, and 25 percent screen twice (the maximum number reported was four). Again, the variability in tools used to conduct the screenings is significant, including SAMISS (32.0%) and other internally developed forms, the Addiction Severity Index, and the Substance Abuse Subtle Screening Inventory (SASSI).

More than one-third of clients interviewed (35.7%) reported that their case manager had discussed assistance with alcohol or drug abuse issues; the most common outcome was a referral to services. Case managers were asked how they assessed their clients' need for substance abuse services. Likewise the case manager observation and chart reviews looked for whether a screening for substance abuse services took place. Over half the case managers reported talking with their clients or the client needs assessment as their method for assessing substance abuse service needs. Client behavior was also noted as a potential indicator of substance use, e.g. frequent job loss, missed appointments, or coming to appointments drunk or high. Some reported actual screening tools that included agency assessments and more formal tools such as the Brief Mast. Few case managers cited the rapport between them and their client(s) as the basis for some self reported need for assistance with substance abuse problems.

Case management session observation and chart reviews revealed a total of 46 instances where substance abuse was either screened for (chart reviews, n=40) or discussed (case management observations, n=6). Several charts documented multiple screens for substance abuse issues during the review period, although most were only screened once. There was evidence that few screenings resulted in a referral. During the case manager observations only one session recorded education that occurred or referrals that were given.

Medical care

Case managers were asked what clients most needed from case management services. A majority of the responses were directly related to medical care – medical care, accessing and/or paying for medical care, an advocate, medications, and education (regarding the disease, disease process, treatment adherence, and risk reduction). As such, it is no surprise that the service most often referred to, as reported by case managers, was medical services. Also no surprise was the number of case managers who reported a good relationship with client clinics or doctors in order to follow up and assure that their clients received medical care. Feedback from the clinic or pharmacy was reported nearly as often as client feedback as the method through which a case manager monitored their client's medical care. One of the questions during the case manager interview was originally designed to inquire about the consequences of a missed appointment; however it ended up yielding valuable information about case manager relationships with clinics and doctors' offices. Responses to this question revealed that clinics or doctors called the case managers when a client misses an appointment or refills on medications indicating a very good working relationship between medical care staff and case managers regarding the well being of clients.

Charts were reviewed for what type and how often education was provided during the 13-month review period. The education topics examined during the chart review related to medical care was nutrition,

HIV 101 information (e.g. disease, disease process), CD4/viral load, supplements, and routine medical care. No instances were found where a chart contained documentation of all these education topics being provided during the review period. HIV 101, CD4/viral load, nutrition and routine medical care were the most frequently documented education topics. Only nine charts of 115 charts had no medical care services received during the review period and even more (n=60) had no referrals to medical care in the past 13 months. Of those receiving referrals (approximately half of the charts reviewed), an average of 2.667 referrals were provided; yet observers of case management sessions only reported one-quarter of the observed sessions as offering a referral to Outpatient Ambulatory Medical Care (OAMC).

Clients surveyed were asked to list the three main reasons they usually called their case manager. The top five reasons reported included getting assistance with medications (38.1%), just to check-in or give an update (34.5%), getting assistance with transportation (25.0%), getting a variety of financial assistance (23.8%), and getting food or food vouchers (20.2%). A variety of other reasons were offered, including getting information and referrals or having someone to talk to about their problems. While “getting assistance with medical care” was not listed in the top five reasons, this issue is obviously a central component of case management. Follow up questions asked clients how often their case manager discusses doctor’s appointments and lab work with them. The majority of clients (46%) reported that their case manager *always* or *often* asked them about their doctor appointments and lab work, while almost one-quarter said they asked *sometimes* or *rarely*, and one-third (32%) reported that their case manager *never* asked.

Two-thirds of clients interviewed (65.5%) reported that their case manager had talked to them about the importance of medical appointments, and that the information they provided was very helpful (mean=9.13 on a scale of 1 to 10). Almost half of clients (46.4%) said that their case manager had checked up on the client to discuss the client’s last doctor’s appointment and lab results to see if they had any questions; 53.3 percent of clients reported that their case manager reminds them to keep scheduled appointments and emphasizes the importance of seeing the doctor regularly.

According to the Case Management Standards of Care case managers are to inquire about the next and last medical visits, as well as the outcome of the most recent medical visit. During the case management session observations only 25 percent of the sessions included inquiry on all three indicators. Another quarter asked at least about last medical visit and another quarter of the sessions did not ask about any of the three indicators.

Oral health

Routine oral health care is important in HIV/AIDS clients; thus, it is a core service in HIV/AIDS case management. Case manager interviews revealed oral health services as the third most frequent/standard referral made upon entry into case management services. Some case managers even described oral health services as an automatic referral. Other reasons for referring to oral health services included requests from clients and visual assessment. Most case managers who discussed following up on a referral to dental care services reported a rapport with the dentist/dental clinic to receive information back when client has been seen, or dental providers enter information into ARIES which the case manager can access. Others reported contacting the client to follow up on any referral made to oral health services.

Fifty-seven percent of clients surveyed reported that their case manager had talked to them about the importance of dental appointments and found the information helpful (mean=9.08 on a scale of 1 to

10). Over half of those surveyed (53.3%) reported that their case manager had discussed ways to assist with dental care with the client in the last 12 months, including referrals to resources available and arranging transportation for clients to see a dental provider.

The chart review confirmed these reports in that for almost every referral to dental care a subsequent entry documented at least one instance of dental services received. Several charts indicated only one referral in the review period but three to eight instances of dental care services received during the same time period possibly indicating oral health needs that required more than one visit such as a routine cleaning.

Medication/treatment adherence

Adherence to medication and treatment regimens is an important issue for case managers to address with their clients. In looking across all data sets a conflicting picture is found. Case manager interviews and observations revealed good relationships with clients and local service providers such as pharmacies, suggesting an environment where case managers are able to easily monitor medication and/or treatment adherence. On the other hand, the chart review unexpectedly showed a small number of charts that contained documentation of medication/ treatment adherence occurring.

Case management agencies completing the online survey (n=25) reported assessing clients for treatment adherence at least once per year, some every visit; three agencies reported using the ARIES questions, but the majority do not use a specific tool (n=15).

As in previous sections of this thematic analysis case manager interviews demonstrated a good client-case manager relationship as evidenced by 86 percent of case managers reporting direct contact with clients as the method through which they ensured clients were adhering to their medication regimen. Likewise the relationship between case managers and pharmacies was also evident in the number of case managers reporting contact between themselves and pharmacies when situations deemed clarification or generated concern on either end. Furthermore, just over half of case managers interviewed reported the use of lab results to monitor client medication and treatment adherence. On the other hand, treatment and medication adherence was discussed in less than 40 percent of the charts reviewed. Chart reviewers reported that the charts containing documentation on treatment adherence was usually in the format of a checklist rather than specific comments providing any detail.

Two-thirds of clients (67%) surveyed reported that their case manager talked with them about the importance of treatment adherence and found the information helpful (mean=9.34 on a scale of 1 to 10). The vast majority of clients are taking HIV medications (90.4%); 63.9 percent said their case manager has helped them obtain assistance in getting their medications. Almost half (46.7%) said that their case manager has talked with them about how to better take their medications, focusing on adherence to the prescribed regimen and how to adjust to side effects.

Observers in case management sessions documented nearly three-quarters (n=44) of the case managers did address medication adherence during their session(s). Only four sessions were observed providing any education on medication adherence.

Behavior/risk assessment

Case management agencies were asked about how often risk behavior is discussed with clients and whether a specific format or tool is used. Of the 26 agencies responding, the frequency of discussing risk behavior ranges from “as needed” (n=7) to “every time they meet with their case manager” (n=6).

One agency reported using the ARIES tool; the other agencies did not have a specific risk assessment instrument or used one developed in-house.

Subsequently, case managers were asked what topics they cover with new clients. Answers that focused on behavior and/or risk reduction were usually categorized as a sort of HIV 101 which addressed several related topics such as disease progression and transmission, medication and treatment, and risk reduction. Risk reduction education was reported by almost every case manager interviewed.

The clients surveyed were asked if their case manager had talked with them about ways to decrease their risk of new infection. Over half the clients (52.4%) reported they had discussed this with their case manager; the primary content of these sessions focused on assessing the client's risk practices, advice on talking with their partner, and encouragement to abstain or use condoms. Almost one-quarter of clients interviewed (22.6%) reported that their case manager offered them education about risk reduction.

Very few case management sessions observed had any risk reduction/behavior risk assessment education completed. As reported with medication/treatment adherence, documentation in the chart review was usually based on a checklist and contained little to no other documentation about what types of behavior or risks were addressed. Those that did were usually focused on high risk sexual behaviors than any other topic.

Assessment of need/acuity

Based on the Standards of Care, clients should be assessed at regularly schedule intervals. When asked if clients are regularly assessed using an acuity scale, 88 percent of agencies (n=25) responded "yes." While the majority reported assessing clients, the frequency of assessment and the tools used varied tremendously. The majority of agencies responding (n=17), the most common response is that clients are screened upon intake and "as needed;" the contextual information qualifying what "as needed" meant in each agency included "as major changes occur," "during a crisis intervention," "in a dramatic change in functioning," and "as [clients'] situation changes." From the agencies that indicated the acuity scale they used (n=13), there is no common tool among those agencies. The responses indicate that while three agencies employ a Department of State Health Services tool, the others are using locally-developed instruments or have instruments currently in development.

The assessment of a client's needs and acuity level occurred at varying levels as reported by case managers during their interviews as well as in the chart review. Acuity levels and client needs can be used as a tool for determining how often a case manager sees/contacts a client. Case manager interviews echoed this with half of the case managers responding to the question "how do you decide how often to see a client" as it was based on client needs. Other case managers reported required contact with the client at intervals ranging from monthly to yearly for "required updates" or they preferred to speak with each of their clients within a specific time frame to stay apprised of their needs and/or concerns. However, of the 115 charts reviewed, less than 20 percent contained an acuity scale completed during the review period, although, nearly 90 percent had at least one need assessment completed during the same time period. Needs assessments did not contain much detail according to chart reviewers' comments; comments regarding acuity scales mostly referenced the acuity scale scores, which acuity scale areas needed addressing, or missing documentation of acuity scale assessments.

Most client charts with a needs assessment completed during the review period had been assessed multiple times throughout the review period (range 2-4 times). Case managers interviewed were asked how often clients are reassessed; most indicated at least bi-annual assessment of needs or assessment more often as needs changed. Needs assessments were most often conducted with a formal tool, although they were either created by the agency or were considered an agency format. A specific tool, Karnofsky scale, was mentioned only once in all data collected.

In a more general evaluation of clients' interactions with their case managers, clients were asked about their frequency of communication with their case managers, their reasons for seeing their case manager, and whether they had needs that were not being met. When asked how often in the past 12 months they had contact with their case manager, 62 percent of clients reported communicating less than monthly, varying from never to every other month. Thirty-eight percent of clients reported communicating with their case manager at least monthly, up to four times per month. One person said they did not have a case manager.

The survey asked clients to list the main reasons they usually called their case manager. As mentioned, the top five reasons reported by clients included getting assistance with medications (38.1%), just to check-in or give an update (34.5%), getting assistance with transportation (25.0%), getting a variety of financial assistance (23.8%), and getting food or food vouchers (20.2%). A variety of other reasons were offered, including getting information and referrals or having someone to talk to about their problems.

When asked if they had needs that were not being met by their case manager, 63.9 percent responded "no." The 36.1 percent who said "yes" reported a variety of needs, including additional financial assistance for housing, utilities, medication, transportation, and food. Also reported were additional services not offered by their case management agency such as support groups, dental care, and transportation services.

A follow up question asked clients what they would change about their case management if they could; clients' responses indicated that they would like more contact with their case manager or for their case manager to be able to spend more time on them when they needed help, better food services, more transportation, and to offer a support group. There were specific criticisms about particular case managers and particular agencies, indicating the perception that some case managers have favorite clients and some are not professional or respectful of clients.

Study Data

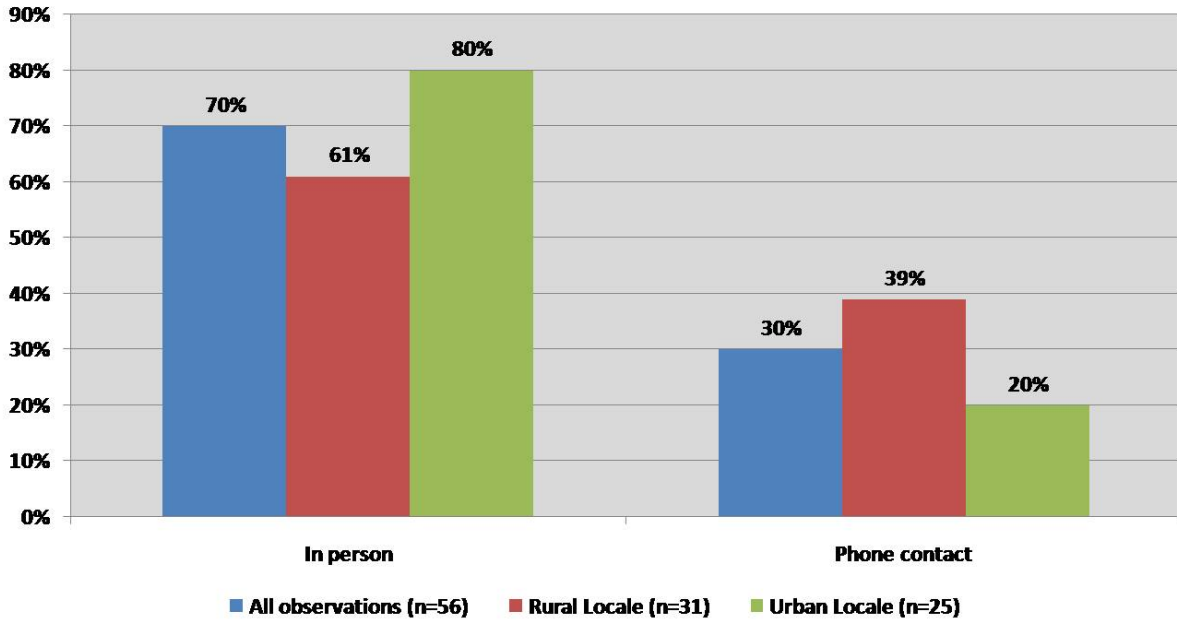
This section contains results from the analysis of supervisor and case manager interviews, case manager observations, chart reviews, client interviews, and the online case management survey.

Case Manager Observations

In case management sites with more than one case manager, at least two case managers were observed at each of the selected sites by BVCOG staff with a total of 56 observations. More than half of the observations were conducted in rural, co-located clinic locations which provided both non-medical and medical case management. Observations were conducted equally in sites with one or two case managers, or three to four case managers.

Seventy percent of the case manager observations were of sessions with face-to-face client interactions; the remaining observations were of telephone contact with clients. Nearly 40 percent of the telephone contacts were from clients in rural areas, where only 20 percent of the urban locations observations were via telephone. Figure 1 graphically illustrates the differences in observed client contacts based on urban-rural geographic location.

Figure 1: Geographic Distribution of Case Management Session Observations

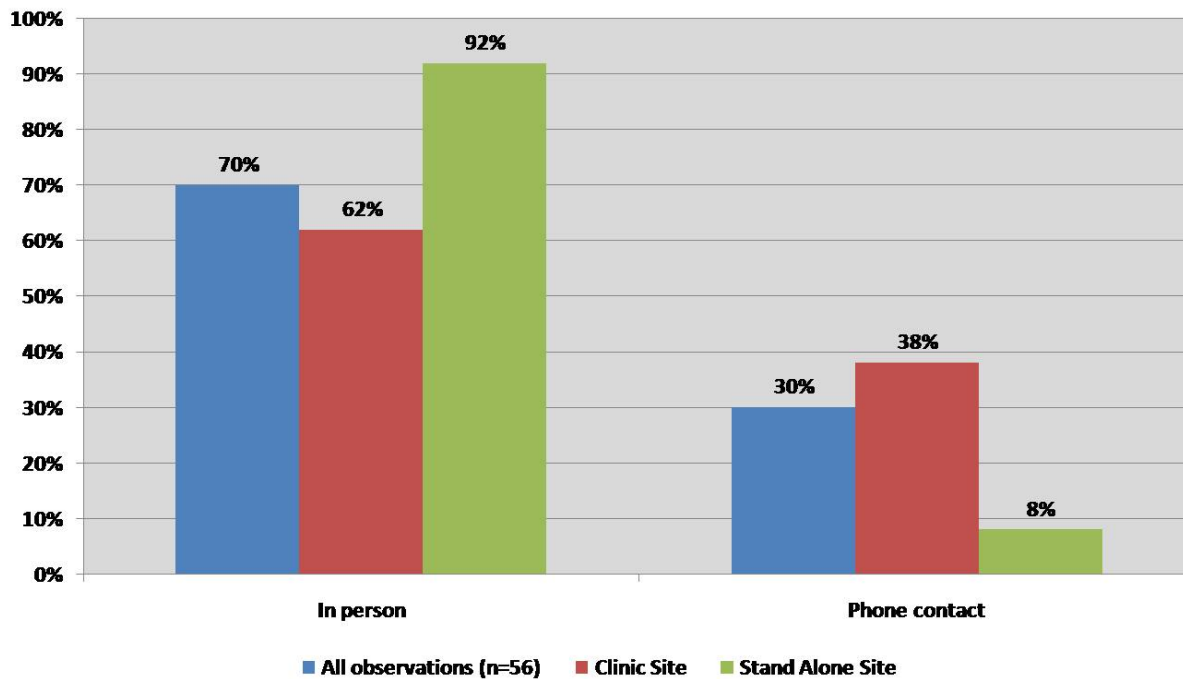


No differences in telephone versus in-person contacts were found in sites with different client to case manager ratios. Observed sessions in stand-alone case management sites were almost exclusively in-person client contact (92%), where only 63 percent of clinic site observations were of face-to-face client sessions. Figure 2 illustrates the distribution of case manager observations based on the agency’s orientation in a clinic or stand-alone site to all observed case management sessions.

The average length of an observed session was about 15 minutes, with only five sessions lasting longer than 30 minutes and nearly one-third lasting five minutes or less. Sessions with short durations were usually telephone conversations with clients to inform them of changes, updates, or items being mailed/delivered.

Data collected during each observation yielded information on: purpose of visit; length of the session; inquiries of last medical and dental visits, next medical and dental visits, and outcome of previous medical visits; specific issues discussed; education and referrals provided; and client-case manager interactions.

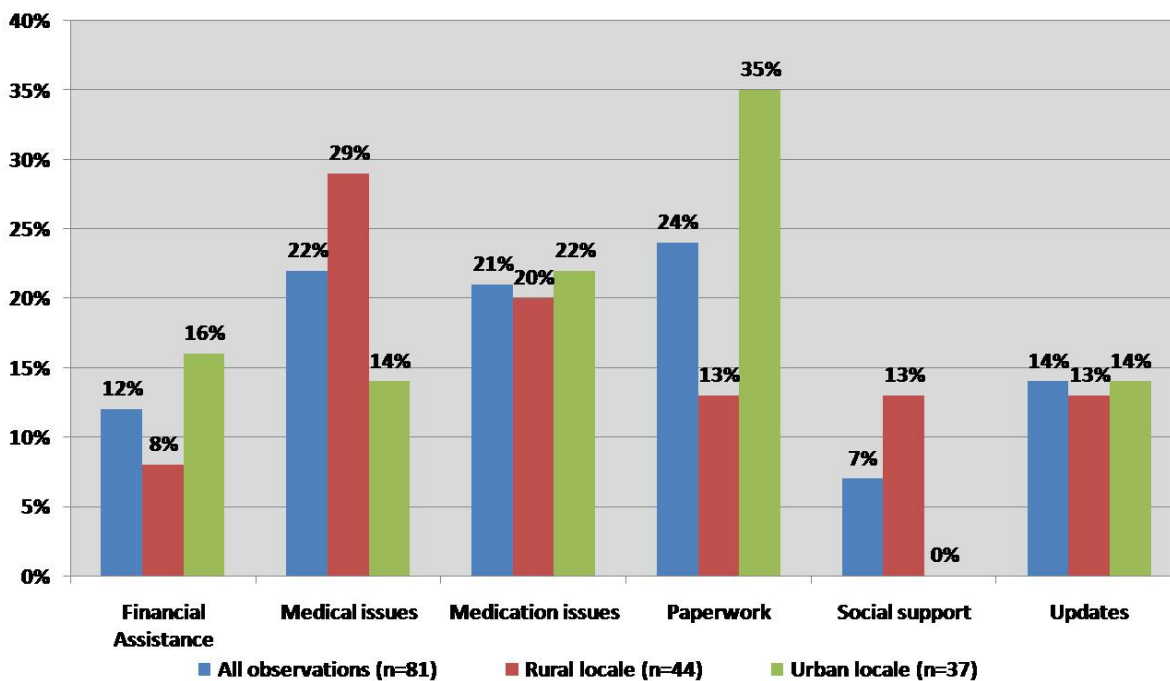
Figure 2: Distribution of Case Management Session Observations by Site Orientation



Purpose of visit/client contact. Observers documented, in their own words, the purpose of the visit or phone call between client and case manager. Nearly 40 percent (n= 22) of the observed sessions indicated multiple reasons (two or more) for the contact. All observed sessions were classified into six major themes or issues as the purpose of the session: **paperwork** (24%), **medication issues** (21%), **medical issues** (22%), **financial assistance** (12%), **updates** (14%), and **social support** (7%). Client contact observations classified as *paperwork* included intake paperwork, yearly updates to charts, completion or re-filing of assistance paperwork, changes in income or financial situations, and contact information, and the completion of follow-up by a case manager regarding specific issues. *Medication issues* discussed during observed sessions were focused on medication assistance, refills, delivery and general discussion on medication use (adherence, problems, etc.). Observations categorized as a *medically related issue* included observed contact with a client in relation to medical or dental appointments – scheduling, rescheduling, and confirming appointments. Other medical issues addressed during sessions included lab work and lab results. Assistance for transportation (rides and gas vouchers), assistance with medical bills, utility bills and housing were visits categorized as *financial assistance*. *Updates* included contact during which case managers were updated of hospitalizations, general conversations where clients stopped by while at other appointments and general “checking in” type situations.

In an urban-rural comparison, both rural and urban sites had multiple issues discussed during each observed session. However, rural sites were the only sites that had social support as a purpose of client contact. Another notable difference between rural and urban locales included urban sites most frequently cited purpose of an observed visit was related to paperwork, where as in rural sites the most frequent reason for a contact was medical issues. Figure 3 further details client contact purposes comparing rural and urban locations to all client observations based on the aggregate total of 81 purposes for contact as listed by session observers.

Figure 3: Distribution of Case Management Session Observation Purposes



*Note: Rural and urban local percentages add to greater than 100% due to rounding

Sites offering both medical and non-medical case management had a greater number of observed client contacts related to paperwork than non-medical case management only sites (32% and 10%, respectively). Conversely, at non-medical case management sites observers documented a larger number of “other” visits - providing social support and referrals. Observations at stand-alone case management sites had a higher percentage of “other” visits. (As noted previously, non-medical case management sites were more likely to be stand-alone case management programs.)

Medical and Dental Visit Information. To determine the extent to which case managers targeted medical outcomes during a case management session observers recorded data on whether five different medical indicators were discussed during the session: (1) previous medical visit, (2) next medical visit, (3) outcome of the most recent medical visit, (4) previous dental visit, and (5) next dental visit. Only five of the 56 visits observed (9%) asked about all five indicators; four of these five observations were in rural sites offering both non-medical and medical case management. There were 17 instances where none of the indicators were asked about, occurring mainly in urban locations with both forms of case management. The purposes of visits without any inquiry did not differ from visits where inquiries did occur; visits were usually related to medication and medical issues, updating records, and/or financial assistance. The indicators most often inquired about during an observed session were last and next medical visits (58%); when case managers inquired about the client’s last or next medical visit (n=38), the outcome of the client’s last medical visit was asked about only 50 percent of the time.

Issues Discussed and Education Provided. Eleven issues were identified during instrument development as the most commonly discussed during case management sessions: medication adherence, risk assessment, mental health, substance abuse, goals identified on care plan, available services in the area, current living situation, job, and financial situations, needs assessment and barriers to receiving services. Only one observed session addressed all 11 issues. The only site to address six or

more of the issues was the clinic with the lowest client to case manager ratio; a rural case management site offering both non-medical and medical case management. The overall mean number of issues discussed was four. Thirteen sessions (23%) addressed at least half of the issues.

Table 2 details how many of the observed sessions discussed the identified issues. More than 20 sessions observed discussed current living situation, available services in the area and medication adherence. Approximately one-third (n=19) of the observed sessions inquired about four or more of the eleven issues. Substance abuse and needs assessment were the issues least discussed during these sessions.

No identified issues were discussed in 12 different observed client contacts. These observations occurred in sessions where the primary purpose of the contact was to update records, refill medication, financial assistance or schedule/confirm appointments.

Table 2: Issues Discussed in Observed Case Management Sessions

Issues	Number of Sessions (n=56) ¹
Current living situation	25
Medication adherence	20
Available services in the area	20
Barriers to receiving services	19
Current job situation	18
Current financial situation	18
Risk assessment	13
Mental health	13
Care plan goals	12
Needs assessment	11
Substance abuse	6

¹Totals are greater than the number of observed sessions. The mean number of issues discussed in a session was four.

Observers also documented any education that occurred regarding the eleven issues identified by the observation instrument; responses were recorded in 55 of the 56 observations. In 75 percent (n=41) of the sessions *no* education occurred on any issues on the case management observation tool. Of the 14 sessions during which education *was* provided, half of the sessions were in person and the other half were via telephone. Education was provided more often in rural sites with both non-medical and medical case management and in clinics with a client to case manager ratio of 60:1.

An average of two topics was addressed in the session observations where education did occur; the most commonly discussed education topic was available services in the area (n=11). Education topics addressed the least were substance abuse, current job situation, service plan goals, and current

financial situation.

Referrals and Vouchers. The case management session observations also looked at how often and which referrals were provided to clients, as well as what vouchers were given to clients. Food pantry, transportation, Medicaid, food stamps, mental health, substance abuse, dental and Outpatient Ambulatory Medical Care (OAMC) were the referrals identified on the case management observation tool. Referrals were provided in only 25 of the 56 client sessions observed (45%). One referral was provided to over half the observed clients receiving referrals (n=15) and two or three referrals were given to 10 of the clients who received referrals. Referrals were more frequently given by rural (66%) case management sites connected to a medical clinic/facility (75%). The most common referral given during an observed session was for OAMC (n=13); the least referred to services were Medicaid, food stamps and substance abuse services. Table 3 illustrates the number of times each of the identified referral sources were made during observed sessions.

Twelve case management sessions were observed during which vouchers were given; 15 vouchers were given indicating multiple needs of some clients. The most common vouchers issued were for transportation and food. One voucher was provided, but documentation did not indicate the voucher type. Vouchers were given more often in rural, co-located sites (66%).

Client-Case Manager Interaction. The case management observation tool included the following questions for the observer to document information on the interaction between the client and case manager(s):

- *were the client’s questions answered;*
- *were questions non-judgmental, open-ended, and did the case manager validate the client’s feelings;*
- *what was the client’s level of engagement during the session;*
- *were previously identified issues readdressed during the session;*
- *did the client appear to understand all aspects of the session;*
- *was a plan proposed by the case manager and accepted by the client; and,*
- *was the case manager supportive of any client issues or concerns.*

In nearly every session observed, the client’s questions were answered (93%), case manager questions were non-judgmental, open-ended and validated the client’s feelings (93%), and the case managers were supportive of the client’s needs (89%). Twenty observations recorded additional comments that the case manager was very friendly and supportive and validated client’s feelings. A handful of observations (n=3) answered the question “*were the questions posed by the case manager open ended and non-judgmental; were feelings validated?*” as “no.” In each of these cases however, further notation indicated a majority of the questions were closed-ended, but the case manager was supportive and validated the client’s feelings. Clients and case managers were equally engaged in three-quarters of all observed sessions. Case managers were rated as very supportive of their clients. The one observation identified as not supportive contained further evidence that the client was in need of financial support, however no funds were available at that time; in an attempt to assist the client, the case manager did encourage the client to call back if their problem went unresolved and offered hope to the client that assistance would be accessible once funds became available. In only four cases the session was client driven, whereas only three sessions were dominated by the case manager.

In a majority of the sessions (n=43) previously identified issues were revisited. Those sessions which did not revisit previous issues were equally distributed across rural and urban sites, had one to four case managers, and were mainly in clinical facilities offering both medical and non-medical case management. All clients were reported to have left having understood the session. A majority of sessions included some type of instruction or discussion of procedures to access services (food bank, clinic, appointments, medications, etc.) or updated or changed care plans. Only one session did not propose or approve a care plan and nine session observations were missing data regarding this data collection item.

Table 3: Frequency of Case Management Sessions Providing Referrals

Identified Referrals	Number of Referrals (n=56)
OAMC	13
Dental	10
Transportation	5
Mental health services	4
Food	2
Medicaid office	1
Food stamps	1
Substance abuse services	1

In analysis of all 56 observations, each session could be coded as a “positive” session. No serious concerns were noted by observers – additional comments provided by observers indicated that case managers were thorough, supportive, gave good referrals and offered hope.

Chart Review Data

A chart review was conducted to collect information about case management activities with a total of 115 charts reviewed. The chart review allowed for an examination of consistency in charting, as well as a comparison of activities against those set forth in the DSHS Standards for Case Management. The DSHS Standards for Case Management are intended to provide a consistent framework for case management across DSHS HIV/AIDS service organizations. Chapter 19 of the Standards for Case Management can be found in Appendix C. The standards of care provide guidance on the essential activities of case management, documentation, program administration, and other requirements for the operation of case management. The five major activity areas within the standards are intake, assessment and reassessment, care planning, referral and follow up, and discharge and transfer. Each major area further specifies activities. For example, within assessment, case managers assess acuity (level of need), conduct or gather health assessments, behavioral risk assessment and counseling, and financial and medical coverage status. The document provides guidance regarding yearly screenings, documentation, and policies and procedures.

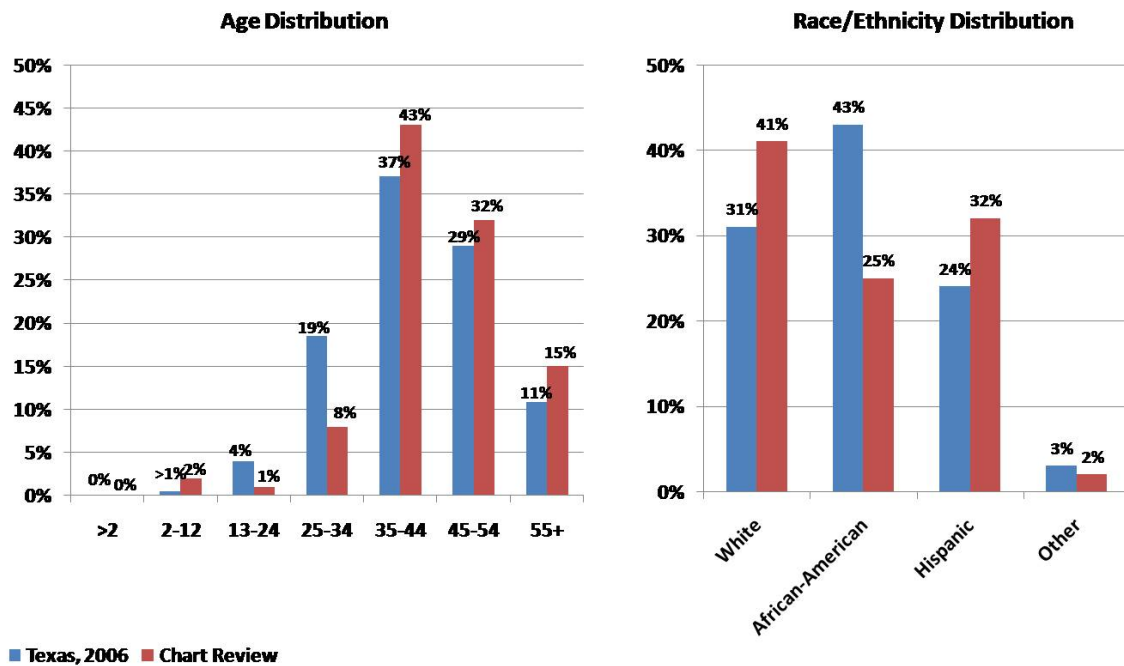
As Texas is a largely rural state, services offered through a single case management agency often targets multiple counties. The chart review not only looked at in-person visits, but taking into account the potential for limited ability or convenience of accessing services in-person, the review also examined phone calls during the review period.

Sampled charts were almost evenly distributed across rural and urban clinic sites. Fifty-three charts (46%) came from rural sites. Likewise, all but one site had a similar sampling taken from their client roster; an average of five percent of the client base ($\pm 2\%$) or between 10 and 20 charts at each site. The site with the smallest client roster had 28 percent of their client roster charts reviewed. The higher sample percentage from the one area is a reflection of a smaller number of clients and more availability of research staff to review charts. Chart reviews were conducted for a review period of September 1, 2006 through October 31, 2007.

Demographic profile. Similar to the distribution of state-wide HIV/AIDS cases in 2006 (HIV/STD Epidemiology and Surveillance Branch, 2008), 72 percent of the clients whose charts were selected were male. Forty percent of the clients were white, 31 percent were Hispanic, 27 percent were African American and 2 percent were categorized as other. The average age of a client was 44 years with an age range of 2 years to 75 years. Figure 4 compares the age and race/ethnicity distribution from the chart review to the 2006 state-wide HIV/AIDS demographics.

Nearly three-quarters of clients had been served by the agency for 3-10 years (n=84, 73%). Fifteen percent of the clients had been in service for 11-15 years; two clients had been with the agency for 16 or more years. Only 10 percent of the charts reviewed were of clients who had been with the agency for two years or less. The distribution of clients across length of time with their agency can be found in Table 4.

Figure 4: Distribution of age and race/ethnicity of chart reviews and 2006 HIV/AIDS demographics



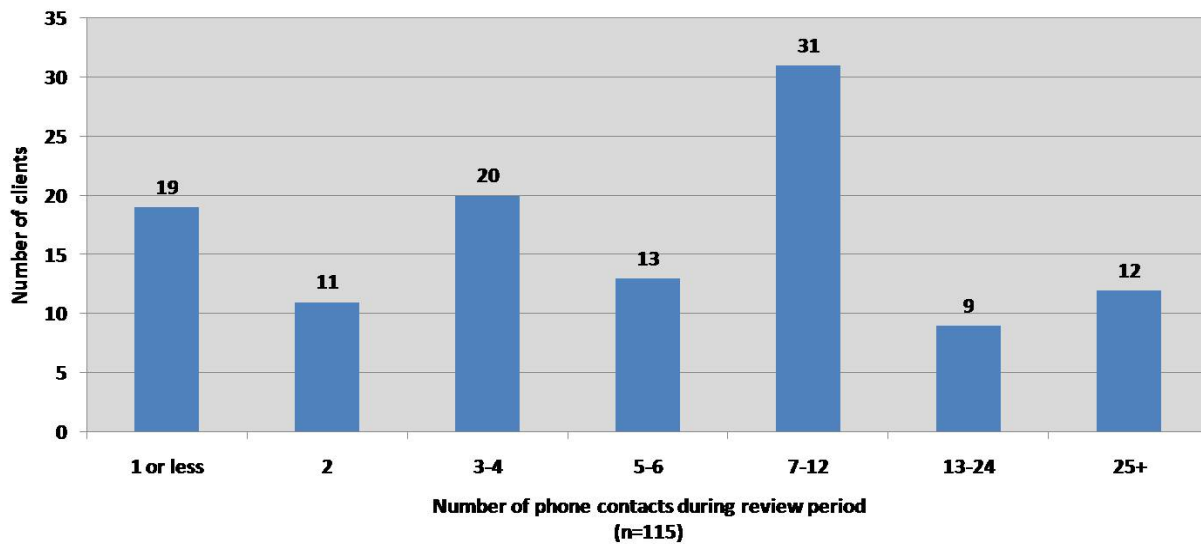
Telephone Contacts. Documentation regarding client contact via telephone was examined for frequency, initiation of the contact and issues addressed during the contact. Telephone contact data was provided for 107 records reviewed. Eight client charts revealed no contact by telephone during the review period while 12 clients (11%) registered 25 or more telephone contacts during the same time frame. Interestingly, clients with 25 or more telephone contacts had an average length of service with the agency of approximately seven years; these clients also had an average of 13.25 medical visits during the review period (range: 1-28 visits).

Table 4: Distribution of Client Chart Reviews (n=115)

Years served	Frequency
1 or less	0
2	12
3-5	48
6-10	36
11-15	17
16-20	2

The average number of contacts by telephone for the specified review period was nine, with just over one-quarter (28%) of the charts containing three to six contacts. Fifty-six percent of the charts (n= 52) indicated seven or more contacts by phone during the review period. A distribution of telephone contact with clients during the review period can be found in Figure 5.

Figure 5: Distribution of Documented Client Phone Contacts



Most clients with 25 or more calls throughout the review period were clients of rural service locations but no other defining characteristics were found. Reviewed charts with a high volume of contact by telephone often contained a repetitive nature regarding the contacts' purposes. For example, many charts indicated a monthly or even greater frequency of phone calls regarding rent assistance, medication refills, scheduling transportation, or requesting/ scheduling/ or confirming of appointments. Three client charts contained documentation suggesting familiarity with services and their own needs as each contacted their case manager a majority of the time for a specific service – transportation, housing assistance, and/or medication refills or assistance. The most common issue for all of the clients with 25 or more calls was financial assistance (103 instances), medications (92 instances), transportation (66 instances), and information regarding an appointment such as making, changing, or missing appointments (62 instances).

When frequency of contact was analyzed based on the client's number of years in case management services, the highest average number of phone calls interestingly came from clients who had been in HIV services for 6-10 years and 16 or more years ($\bar{X} = 11$, $\bar{X} = 24.5$, respectively). However, it should be noted that one of the clients with 16 or more years in service had a high volume of telephone contacts during the review period – 43 calls.

The most common reason for telephone contact in the two groups with the longest time in case management services was some type of assistance – housing, medications, medical bills, and food pantry. Documented telephone contact with clients having six or fewer years in case management service had the following reasons for contact with their case manager:

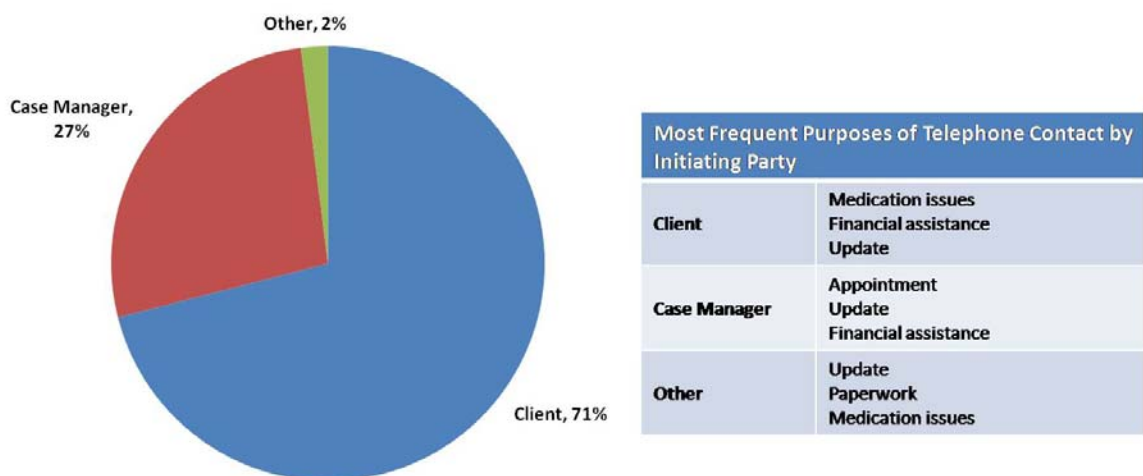
- inform clients or requests from clients for medication refills;
- make or confirm an appointment;
- report or inquire about a missed appointment; or
- arrange transportation.

Just over half the charts reviewed (n=63) had six or less telephone contacts during the review period. These clients had been in case management for an average of 6.25 years. Client contact purposes did

not vary greatly between high and low volume contacts; client contact documentation found in charts with a low volume of contacts also focused on issues such as financial assistance, appointments, and medications. Some clients with six or fewer telephone contacts (n=16) had higher numbers of in person visits totaling 10 or greater. Conversely, five clients with a higher volume of telephone contacts (>10), were less likely to have in person visits during the review period (<5).

Figure 6 provides a breakdown of telephone contact initiation. Initiation of contact was most commonly made by the client (71%) and was usually for the following purposes: medication issues, financial assistance, or an update between client and case manager.

Figure 6: Distribution of Telephone Contact by Initiating Party



Twenty-seven percent of the time the documented client contact was initiated by the case manager and the remaining contacts (2%) were initiated by someone on behalf of the client – parent, partner, or friend. Telephone contact with clients covered a wide range of topics. Overall, the most commonly cited reason for phone contact with a client was related to medication issues – adherence, refills or financial assistance.

Office Visits. In a similar manner to telephone contacts, the chart review looked at office visits during the review period. The number and purposes of the visit were recorded. An average of eight office visits were found in the charts reviewed (minimum of zero and maximum 31 visits), with over half of the charts logging six or fewer visits. Approximately one-quarter (n=26) of the charts reviewed revealed clients with 13 or more visits per year; this group had an average length of service with the agency of 6.5 years. When looking at the number of years a client had been in case management services, clients in service for 3-5 years or 6-10 years had the highest average number of office visits recorded – an average of eight and nine visits, respectively. Those clients with the lowest average of in person visits were those in service for 16-20 years.

The top five reasons for an office visit were: (1) food assistance, (2) paperwork, (3) updates, (4) medication issues, and (5) financial assistance. Different from the analysis of telephone calls, food assistance and gas vouchers were analyzed separately from financial assistance due to the frequency with which they were cited; paperwork, updates, and medication issues retain the same definition found

above in the classification of phone call purposes. Gas vouchers were the sixth most commonly cited reason for an in person visit (8.2% of all purposes cited).

The top five reasons for an office visit were examined to determine which site characteristics reported the purposes more frequently than their counterpart – e.g. financial assistance was reported by 45 percent of rural clinics and 55 percent of urban clinics. Results for the top five reasons for an office visit are as follows:

- *Assistance for food* was reported more frequently in rural sites (86%), clinically-based sites (70%), or sites offering non-medical case management (76.5%) than their counterparts; documentation of food assistance found in the chart review of office visits was not very common in sites with a high ratio of clients to case managers (1.2%).
- The purpose of completing or updating *paperwork* was found more frequently in case management sites that offered medical and non-medical case management (59%), those that were clinically-based (83%), or those with a low client to case manager ratio (52%).
- Rural sites (64%), sites with both types of case management (57%), clinically-based case management (68%), or sites with a medium client to case manager ratio (58%) were more likely to report *updates* and/or *medication issues* than their site counterparts.
- *Financial assistance* was reported more frequently by urban sites (55%), sites offering both types of case management (62%), or clinically-based sites (82%).

Likewise, each site characteristic was examined for the top three reasons for an office visit. Paperwork and/or some type of assistance (i.e. financial, food, gas voucher) made the top three listing for almost every characteristic. Table 4 details the top three reasons for an in-person visit by site characteristics.

Table 4: Most frequent reasons for in-person visits by site characteristic

Rural	Urban	Non-medical Case Mgt.	Both Case Mgt. Types	Co-located	Stand-alone
1. Food	1. Paperwork	1. Food	1. Paperwork	1. Paperwork	1. Food
2. Update	2. Update	2. Gas Voucher	2. Update	2. Food	2. Gas Voucher
3. Gas Voucher	3. Medication	3. Medication/ Paperwork	3. Medication	3. Update	3. Update
Low Client to Case Manager Ratio (68, 80, 85:1)		Medium Client to Case Manager Ratio (101, 109, 117, 131:1)		High Client to Case Manager Ratio (227:1)	
1. Paperwork		1. Update		1. Financial Assistance	
2. Food		2. Food		2. Medication	
3. Medication		3. Gas Voucher		3. Paperwork	

Screenings and Referrals. According to the DSHS Standards of Care (2007) the client and case manager are to work collaboratively to complete a face to face needs assessment “to assess for the need for medical, dental, psychosocial, educational, financial, nutritional, mental health, substance use, risk reduction and other services (pg. 4).” This information is used to develop a plan of care and coordinate a continuum of care to provide appropriate levels of health and support services, ongoing assessment of needs and support systems, prevention of unnecessary hospitalization, and ongoing assessment of the disease process, medication and treatment adherence, and risk reduction counseling needs. While this assessment/reassessment is required yearly, ideally, at each client contact opportunity, needs should be reassessed informally and are subsequently documented should additional needs be identified.

In this chart review, 115 active client charts were reviewed to determine if the following screenings had occurred during the review period: mental health, substance abuse, behavior risk and if an acuity scale had been completed. Table 5 summarizes the percentage of charts with at least one completed screening for each topic during the review period. The following is a summary of the findings.

Mental Health and Substance Abuse Screenings. Twenty percent of the charts (n=23) reported at least one mental health screening during the review period. Only three clients had received more than one screening in the same time period. Of the 23 with a documented mental health screening only seven received appropriate referrals and six clients should have received a referral but did not; only five referrals were followed up on. Twenty-three comments regarding mental health screenings from reviewers were found, although these comments were not necessarily found in the same charts containing a documented mental health screening. The additional comments by reviewers (n=115) contained nine notations of clients admitted to treatment or under a doctor’s care, three clients screened without a formal screening tool, three clients indicated a need for mental health services without documentation of a screening, and one client refused a referral to mental health services.

Table 5: Percentage of Client Charts (n=115) with Completed Annual Assessments

Assessment	Percentage
Mental Health	23%
Substance Abuse	28%
Behavioral Risk	43%
Acuity Scale	17%

Documentation of a substance abuse screening during the review period was found in 28 percent of the charts reviewed (n=32); three-quarters (n=24) received one screening during the review period, the remaining eight were screened twice. Ten clients’ screenings indicated a referral to services was appropriate; however, only half of those (n=5) received a referral according to reviewer notes. Follow up was completed for four out of the five clients that received a referral.

Behavioral Risk Assessment. Only 49 charts reviewed contained documentation that behavioral risk assessments or discussion of behavior was completed during the review period. Of these charts most clients discussed behavioral risks once (70%); 29 percent of the charts discussed risk two to three times; and one chart documented four risk behavior discussions (1%). According to reviewer documentation six charts indicated referral to health education/risk reduction counseling (HERR) as necessary, but only two were referred (33%). Only one of these referrals was documented as having any follow up completed.

Reviewer comments regarding health education and risk reduction frequently stated that: (1) charts contained documentation of risk discussion or education being provided; however, they lacked proper documentation as indicated in the Texas Standards of Care for case management; and, (2) there was frequent denial by clients of any engagement in high risk behavior.

Acuity Scale Assessments. The use of an acuity scale was documented in only 17 percent of the charts reviewed (n=20), the majority of which were from one case management site (n=13). Only one chart documented the use of a named acuity scale during the review period – the Karnofsky Scale – although another case management site documented the use of the same scale, albeit was used last in 2000 upon a client’s entry into services. All other scales listed were either called an “acuity assessment” or considered an agency or self-developed acuity scale. Reviewers were most likely to have found that

either clinic sites did not have an acuity scale in place, or a completed acuity scale was not located in the client chart as required by the Texas Standards of Care.

Education Received. Clients are to receive education on medication adherence, the HIV disease process, risk reduction and prevention strategies (including substance abuse), nutrition and oral health on a yearly basis or more frequently as needed according to the Texas Standards of Care (2007). Reviewers examined charts for evidence of whether education had been provided on HIV-related topics; and, if so, how many times during the review period they had been addressed. Only thirty-four percent (n=39) of client charts documented that a client had received some type of education. Topics were most commonly addressed one to three times in the 13 month review period, although there were a few documented cases with greater than 10 instances of education regarding routine medical care (n=19) and another instance with 14 documented cases of education on multiple topics. The average number of times education was provided to any client receiving education during the review period was 4.5 times.

No one single client received education on all of the topics identified by the chart review tool, in fact just a little more than half of the charts received education on two or fewer topics. Reviewers’ comments indicated that no education was needed or provided in 19 of the charts (17%) reviewed for the selected review period.

When education occurred, the three topics addressed most frequently were HIV 101, CD4/viral loads, and routine medical care. Table 6 below provides a picture of how often education was provided on each topic identified during the chart review tool. “Other” as represented in this table consisted of numerous topics, most frequently standard care issues for maintaining a healthy lifestyle and risk reduction.

Table 6: Frequency of Documented Education Provided by Topic for all Charts Reviewed (n=115)¹

<i>Education Topic</i>	<i>Charts with education documented</i>	<i>Education Topic</i>	<i>Charts with education documented</i>
Nutrition	16%	Supplements	0%
HIV 101	18%	Routine Medical Care	32%
CD4/Viral Load	17%	Routine Dental Care	18%
Smoking Cessation	3%	Other	49%

¹Percentages total to greater than 100% because multiple topics may have been addressed in each client visit.

According to the comments documented by reviewers, 32 of the 39 clients received education on at least one of the required topics according to the Texas Standards of Care. Most education provided by case managers focused on some type of medical/preventive care or prevention across all case management sites. The education topics were not always specific to HIV clients, but generally can be acknowledged as a healthy lifestyle for all persons - i.e. risk reduction, well woman exams, preventive screenings, eye health, oral health, immunizations, medication adherence. Additional education topics that were documented by reviewers included transportation, life skills such as budgeting and money management, clinical trials, perinatal transmission, and septic system management.

Treatment Adherence. Adherence discussions are meant to work with the client to encourage participation in suggested medical care and medication regimens. Measuring adherence assesses a client's compliance with doctor and lab appointments, and compliance with a medication regimen. Once problem areas are identified, strategies are offered to address barriers or problems with compliance. Only 45 charts contained documentation of treatment adherence discussions at an average of two times per chart (range of 1-7 times during the review period). Based on the data gathered we are unable to identify any underlying themes regarding why there were 70 client charts with no documentation of adherence discussions. The average number of years the clients had been served by the agency was the same for charts with discussions on adherence as those without discussions (\bar{X} =6 years). However, when treatment adherence was examined between rural and urban clinics, 75 percent of rural site charts contained no documentation of treatment adherence discussions compared to 50 percent of the urban charts that discussed treatment adherence at least once. No discussion of treatment adherence was found in any charts from stand-alone case management sites, yet 49 percent of clinically-based sites discussed it at least once. Non-medical case management sites did not discuss adherence during the review period in 90 percent of the charts reviewed. One limitation of the chart review instrument is that it did not indicate if a client was on ART and therefore if treatment adherence discussions would be appropriate. Clients not on ART may take other medications, in which case adherence discussions would still be appropriate, however this information was not collected on the chart review instrument.

Needs Assessment. Nearly 90 percent of charts reviewed contained documentation that a client's needs had been assessed at least once during the review period. A majority of clients had their needs assessed once or twice in the review period (93%), however five clients were assessed more frequently (3-4 times). Reviewers used the comments section to illustrate the types of needs identified during assessments, the dates the assessments were conducted, and to express concern for charts that contained inadequate documentation of client needs. According to reviewer notes charts with little written documentation regarding client needs tended to have checklists for needs assessment with no qualitative documentation, incomplete needs assessments or documentation of "checking in" with clients more likely to be categorized as "how things are going," rather than inquiring specifically about and/or determining client needs.

No major differences were found in comparison of different types of case management sites. But, the chart review did reveal that needs were assessed more frequently (i.e. three or more times) during the review period in urban sites, sites co-located with a clinic, and in sites offering both types of management.

Plan of Care. Plans of care are developed collaboratively by the case manager and client and include identified problems, strategies to address problems, tasks and responsibilities for both the case manager and client and the desired outcome or goals of the care plan. This design helps the client to take an active role in managing their disease and aids the case manager in helping the client achieve outcomes and enhance health status and quality of life. Care plans are to be updated when goals are achieved, if new issues arise, or following a reassessment (DSHS, 2007). According to reviewers 74 percent (n=84) of the charts reviewed had a plan of care in place; half of these had plans that were consistently followed. There were no differences among site characteristics regarding plans of care except for in the ratio of clients to case managers. Data did reveal that sites with the smallest client to case manager ratio had fewer plans of care in place – 62 percent of these sites charts contained a plan of care. These sites had 60, 68, or 85 clients to one case manager and were all co-located case management sites. Sites with the largest client to case manager ratio (227:1) had the highest rate of plans of care in place (84%) in the charts reviewed. These sites were all urban, co-located sites.

Plans of care are intended to be updated no less than annually. As many as four updates were documented to have occurred to care plans during the review period, but on average there was one update during the review period for approximately half the charts (52.6%) - indicating an update at least once. Reviewers tended to comment on the lack of detail or missing care plan components in the case manager’s documentation and a repeated inconsistency between determined needs and care plan items.

Referrals to services and services received. To capture information on the types of services referred to and received by clients, the chart review collected data on how many times a referral was provided and medical care was received during the review period. The services about which data was collected were previously identified areas on the assessment tool. One case did not document any information in the two question sets regarding services, therefore the discussion of services referred to and received will be limited to those that did (n=114).

Documentation of the review of 114 charts revealed that the three most often referred to services were referrals to medical care (n=54; 47%), dental care (n=29; 25%), and medication assistance (n=22; 19%). The least referred to services were prevention services (n=1; 0.9%), legal assistance (n=3; 2.6%), and substance abuse assistance (n=3; 2.6%). A total of 29 charts reviewed contained no documentation that any referrals were provided during the review period.

Reviewers were asked to document the number of referrals given for each topic during the review period; a total of 488 referrals were provided in the 114 charts reviewed. The largest number of referrals made during the review period in one client’s chart for any specific service was 17 referrals to medication assistance services. Most services had between one and three referrals documented in client charts. Table 7 illustrates the breakdown of all 488 documented referrals found during the review by referral topic.

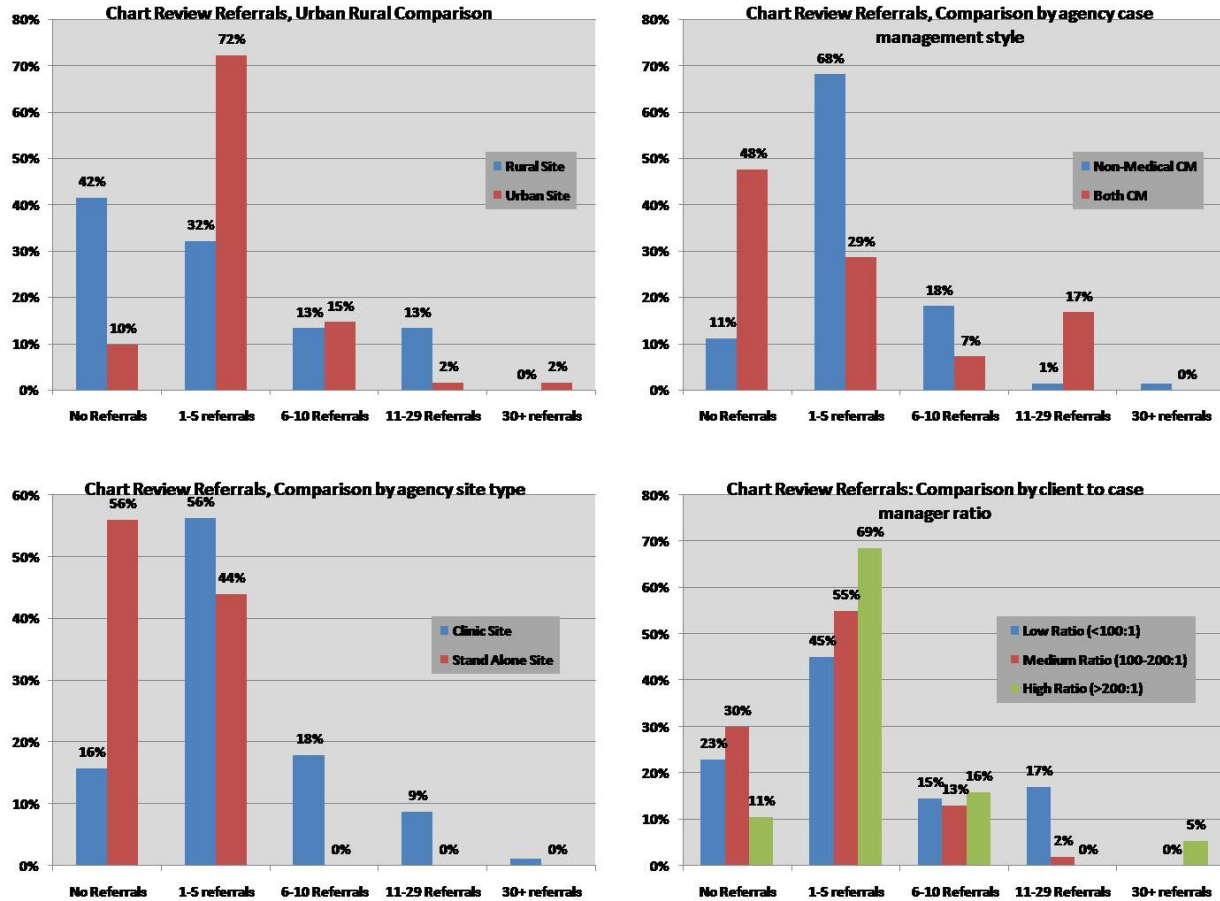
Table 7: Frequency of Documented Referrals by Topic

Figure 7 compares the number of referrals provided by agency site location, case management type, site type, and client to case manager ratio. Site and agency characteristics of reviewed charts with no

<i>Service Referral</i>	<i>Percentage</i>	<i>Service Referral</i>	<i>Percentage</i>	<i>Service Referral</i>	<i>Percentage</i>
Medical care	30%	Eye care	7%	Utility assistance	2%
Drug assistance	23%	Mental health	5%	Legal help	1%
Access to food	14%	Transportation	5%	Substance abuse assistance	1%
Dental care	8%	Housing assistance	4%	Prevention services	<1%

referrals tended to be rural, stand-alone sites providing both types of case management. Sites with a low client to case manager ratio (60,68, or 85:1) had a greater number of referrals.

Figure 7: Referral Distribution by Site Characteristic



In contrast to referrals, nearly three-quarters of client charts reviewed had received medical care (71.9%) at least once during the review period even though less than half of the charts indicated that the client received a referral to medical care. The other most commonly reported services received, according to chart documentation, were medication assistance (63%) and access to food (43.9%).

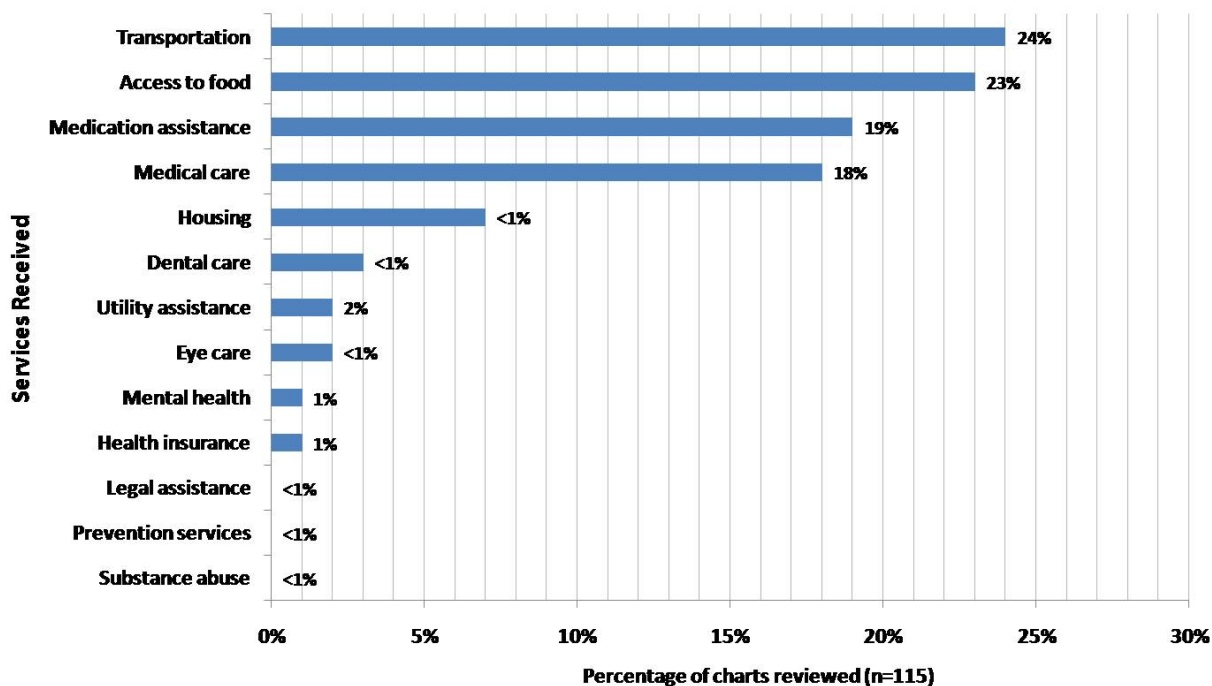
There were over 2,100 documented instances of services received when combined across all services. The most frequently accessed, non-medically related service both overall and by any one client was transportation – 518 (24%) and 76 documented instances, respectively, during the review period. Medical care was the most frequently accessed medical service by one specific client with a total of 36 instances of medical care received. However, overall, assistance with prescriptions was the most accessed medical service with nearly 20 percent (n=410, 19%) of the overall received services.

Clients from rural sites, non-medical case management sites, sites with a medium ratio of clients to case manager (101, 109, 117, or 131:1), and stand-alone sites were the most likely to *not* receive medical services referrals. Also, despite only finding 17 percent of clients received a referral to medical care and 13 percent to transportation services, these services were the services most used by clients. Transportation services had the highest documentation of use with a maximum number of times this service was accessed being 76 times during the review period. At least three client charts contained documentation of greater than 50 instances of receiving transportation services; however, the

maximum number of times transportation referrals were documented in the chart review was five. Over half of the charts reviewed (54.5%) indicated clients received food services (i.e. food vouchers, gift cards, or food pantry). Chart documentation revealed some clients receiving food services as many as 50 times during the review period; these charts were reviewed in urban, co-located sites with both non-medical and medical case management, and had a medium range of clients to case manager.

Other services accessed by at least 20 percent of clients were eye care, dental care, and housing assistance. Similar to referrals, the three services accessed the least were substance abuse assistance (1.8%), legal assistance (1.8%), and prevention services (4.4%). Figure 8 shows the frequency at which services were accessed as documented in client charts during the review.

Figure 8: Distribution of Documented Services Received by Clients



Response to noted needs. Reviewing client charts, in part, attempted to define areas for improvement. An area frequently addressed in the care of HIV/AIDS clients is to determine what needed services/aid they may have that is not met. Chart reviewers were assigned the task of analyzing each chart for any needs not met during the review period. Only sixteen charts (13.9%) had missing information on this question. Reviewers provided responses and comments on 99 charts and analysis showed nearly two-thirds of the clients had needs that were met. Another 15 percent noted that some needs were responded to, but others were not, and 12 percent documented identified needs that were not responded to. Needs not met included no follow up after hospitalization, accessing food, housing, utility and medication assistance, dental and eye care services, and risk reduction education.

The most common need not met was mental health and substance abuse treatment services. As stated in the section above, mental health and substance abuse services are the least referred to and accessed services.

As in other sections of the chart review, reviewers reported inconsistent or a lack of documentation regarding services received, referrals made, and client needs. There were multiple statements by

reviewers concerning needs noted in an assessment, yet not addressed or followed up on, referrals were not provided, and clients being denied services due to lack of funds.

Follow up to previous issues. Reviewers examined client charts for documentation that previously identified issues had been followed up on. Out of 87 charts with data on this topic, nearly half (n=40) contained documentation of follow up. Thirty percent did not follow up on previously identified issues and another 14% showed that some issues were followed up on, yet others were not. The most commonly documented issues not followed up on included: substance abuse, mental health care, or dental care. In many of these cases, follow up on these topics were initiated by the client, not the case manager.

Part B Case Manager Interviews

In order to better understand the current case management process, 21 case managers were interviewed. The interview session gathered information on the case manager's experience, client load, daily activities, regimens followed when working with clients – how often they are seen, issues addressed (assessment, referrals, and education) on a regular basis, and assurances that clients are receiving services such as medical and dental care/services.

Case managers had an average of 4.80 (\pm 3.18) years of experience as a case manager. Some had been employed as a case manager for less than a year (n=3) up to twelve years, with a median of 4 years experience. Average number of years of case management experience did not differ based on years employed within an agency, mainly due to the fact that all but one case manager reported the same number of years of case management experience as the number of years working at their agency.

Case managers' self-reported case load ranged from 35 to 108 clients and had a mean of 77 clients. A large difference between urban and rural clinics was present when looking at average number of clients. The eight case managers in urban clinics carried an average case load of 97 clients compared to the rural clinic case managers who had an average of 61 clients on their case load. Due to the unique nature of case management at one urban clinic, three interview responses were not included in this analysis because job duties are distributed and rotated across all employed case managers (described previously).

The interviews further sought to define a case load by discussing client acuity levels. Case managers were asked how many of their clients were low acuity (need minimal help) versus high needs clients (those with very complex issues and low levels of independent problem solving skills). Case managers reported that an average of 44 percent of their clients were low acuity; two case managers reported low acuity levels on as high as 80% of their clients. Interestingly, these case managers came from opposite ends of the spectrum of client to case manager ratios – one was from a site with a 68:1 ratio and the other from a 227:1 ratio site. It is important to note, though, there were very few homogenous reports from the case managers within the same clinic. Case managers had similar responses when asked what percent of their clients were high needs, although similar to the low acuity question, the response range was quite large (13% to 80%). High needs clients were reported to represent an average of 31 percent and an additional 38 percent of clients were reported to be somewhere in between – needing assistance accessing food, transportation, and financial assistance, but do not need help with other problems.

Case managers were also asked what they felt were the goals of case management and how they would improve case management services in their area. Case managers interviewed reported the following as goals of case management:

- assist the client in becoming self sufficient,
- assist the client in meeting their needs through non-medical case management,
- assess client needs,
- provide support,
- help clients access services, medical care and medications.

These latter goals can be considered a precursor or main component of assisting clients to become self-sufficient, however, of those case managers believing the *main* goal of case management was helping the client become self-sufficient or independent (n=11), almost all simultaneously reported accessing services and medical care as a goal(s) of case management. Other case managers reporting client support via case management, assessing needs, and accessing medication or services as the main goal(s) of case management (n=10) **did not** tend to report self-sufficiency or independence as a goal of case management. Further, independence/self-sufficiency was reported as a goal of case management more frequently by urban clinics with both non-medical and medical case management and large case loads (greater than 100:1).

Interestingly, when case managers were asked about when clients are discharged from care, most case managers reported a similar reason – the client moved. Most reported that they were not aware of a client being discharged for any other reason. Only a handful of cases (fewer than 5) were known to have been discharged among all case managers; these discharges were related to death or unacceptable client behavior. No case managers reported a discharge due to self-sufficiency, despite the importance case managers placed on self-sufficiency as a goal of case management. The Standards of Care list the following reasons for discharge: death, client request, client moves out of the area, incarceration, lost to follow up, behavioral issues, or completion of a client’s care plan.

When asked how to improve case management in their region, the most common answers (61% of all responses) could all be linked to insufficient funding. Of the 48 different responses to this question, suggestions for improving services in the area were aimed at easing the paperwork burden for case managers. Suggestions to ease the burden focused on consolidating, standardizing, or reducing the redundancy of current paperwork, of which paperwork and administrative requirements were cited as the greatest burden on case managers. Paperwork and administrative requirements were reported to be cumbersome and time-consuming, detracting attention away from clients and assisting them in fulfilling their needs and increasing their quality of life. All responses to this question could be placed on a progressive pathway beginning with an increase in funding would allow for more staff to be hired, thereby reducing the caseload and easing the burden of data entry. Further, as caseloads are reduced and case managers are better able to manage administrative responsibilities such as data entry, more time would be available for direct client contact and building relationships to establish rapport with clients which could increase adherence to the client’s care plan.

Case Management Supervisor Interviews

Ten case management supervisors were interviewed during this evaluation, representing eight sites. Interviews were conducted in equally rural and urban sites. A majority was co-located in medical or health clinic sites (75%) and utilized both social and medical case management (62.5%); 63 percent of the supervisors interviewed were in sites with a client to case manager ratio of over 100:1. Supervisor interview data analysis examined education level, previous experience, and training; interviews also captured supervisor responsibilities and tasks performed on a weekly basis, opinions on the importance of standards of care, and the goals of case management.

Education, experience and training. Case management supervisors interviewed reported holding higher level degrees; two-thirds (n=6) had at least a bachelor's degree in psychology, sociology or social work. Of those six supervisors, four held a master's level degree or higher, including two masters of social work, one master's degree in clinical psychology, and a nurse practitioner. Other supervisors were a licensed vocational nurse and licensed social workers.

Nearly all supervisors at urban clinics had prior experience as a case manager, where almost all rural supervisors and no previous experience. Overall five out of nine supervisors interviewed had prior case management experience. No supervisors interviewed from stand-alone service sites had prior case management experience.

A majority of supervisors reported receiving case management or supervisor training through previous employment. Specific case management training and continuing education were cited by six supervisors. Rural site supervisors stated more case management training and continuing education compared to urban supervisors who reported training through previous employment as case managers or supervisor positions. Two stated they had received no specific training on case management or supervision.

Responsibilities and weekly tasks. Supervisors were asked to describe their typical work week, specifically direct patient care, supervising staff, and administrative duties. Nearly all supervisors reported responsibilities in all these areas. Direct patient care and administrative duties were reported to be the most time consuming tasks each week. Supervisors were less likely to report staff meetings and supervision as taking significant time each week. Interpretation of the data is difficult because of inconsistencies in the answers provided by supervisors. For example, some supervisors reported weekly percentages regarding specific activities, where others did not.

Seven out of nine supervisors stated they spent time providing direct patient care. The amounts of time spent in direct care reported ranged from "minimal" to "most" of their time. Only one supervisor reported no direct patient care responsibilities; one interviewee did not report on direct patient care. Administrative duties were reported by most supervisors as occupying approximately 20-25 percent of their time – mostly related to the AIDS Regional Information and Evaluation System (ARIES) and reporting requirements. Supervisory duties and staff meetings were reported to take minimal time during the week. Nearly all supervisors reported holding weekly meetings with staff members. Administrative duties such as filing for payment, personnel evaluations, grant writing and traveling were reported as other duties.

Over half of those interviewed reported supervising other programs not Ryan White funded or not related to case management. Over all, eight supervisors reported supervising between one and three programs (including Ryan White programs); however, one supervisor reported a total of 15 programs supervised. A majority was responsible for two or three programs. In addition to case management programs, food pantry, transportation and the Housing Opportunities for Persons with AIDS (HOPWA) programs were the most likely to be reported as other programs supervised. When the outlier supervisor with 15 programs is removed from analysis, there are no differences found between urban and rural supervisors, nor between those supervisors working in stand-alone versus clinic case management sites.

Case management issues. The last component of the supervisor interviews consisted of four questions: (1) *What is the goal of case management (in your opinion);* (2) *what is the difference*

between medical and non-medical case management; (3) what are the most important aspects of the Department of State Health Services Standards of Care; and (4) what would you do to improve case management services in your area?

Overall, supervisors agreed that the main goal of case management was to meet clients' needs – accessing services and resources, improving quality of life, and empowering the client to help themselves. Each supervisor stated major differences between non-medical and medical case management. However, the common theme reported was the complementary nature of non-medical and medical case management styles. Supervisors focused more on the differences in services between medical and non-medical case management. For example, supervisors' comments generalized non-medical case management as focusing on “things not HIV related” or “quality of life issues” such as food, social security, transportation, housing, bills, etc. Comments specific to medical case management referenced medications, medical outcomes, and the “medical person.” The data can be interpreted to infer that a majority of supervisors felt having both medical and non-medical case management addresses the whole individual from different perspectives.

The suggestions for improving case management services were numerous. The three most commonly reported areas for improvement were reduction in paperwork, coordinated case management between service organizations, and a need for substance abuse services. Other suggestions included hiring more qualified staff, improving upon the current base services, increase in funding, access to specialty care, and easier access to lab results and pharmacies.

When asked what the most important aspects were of the Case Management Standards, one supervisor declined to comment. Of the remaining eight, all but two supervisors had positive comments regarding the standards of care. Both of these interviews captured different perspectives. One case manager reported no familiarity with the Standards; the reason for this, to paraphrase, was that the Standards were most likely written by someone outside of the HIV service setting and that they felt as long as they met the needs of their patient then they were most likely going beyond the required Standards. On the other hand one supervisor reported that the standards of care seem pretty minimal, but was unrealistic in thinking clients can be “managed” into not needing some type of assistance – e.g. “we have clients who are pretty self-sufficient, but they're never going to be un-poor.” Others with a favorable view of the Standards were pleased with how the standards created consistency across the state, noting specifically the focus on the client and needed services, the protection of clients and the documentation of services provided.

Client Interviews

The purpose of the case management client interviews was to hear directly from clients about how case management works in Texas. The interviews were collected by phone and sought information about clients' experience with case management and their service providers.

A total of 84 clients completed the interview, with respondents from eight different service regions in Texas. The survey included 90 variables organized into two categories of questions regarding the clients' general relationship with their case manager and the specific services they had received in the past 12 months. The results will be organized by these categories and their respective questions.

General Relationship with Case Manager. In this section of the survey, clients were asked about how often they had contact with their case manager and what type of services they discuss with their case manager.

When asked how often in the past 12 months they had contact with their case manager, 62 percent of clients reported communicating less than monthly, varying from never to every other month. Thirty-eight percent of clients reported communicating with their case manager at least monthly, up to four times per month. One person said they did not have a case manager.

The survey asked clients to list the three main reasons they usually called their case manager. The top five reasons reported by clients included getting assistance with medications (38.1%), just to check-in or give an update (34.5%), getting assistance with transportation (25.0%), getting a variety of financial assistance (23.8%), and getting food or food vouchers (20.2%). A variety of other reasons were offered, including getting information and referrals or having someone to talk to about their problems.

When asked what type of education their case manager offered, clients reported that they discussed medication adherence (25.0%), risk reduction (22.6%), and availability of other community resources (10.7%). Other topics discussed included basic information about HIV/AIDS and education on oral health and mental health. Over one-third of clients (35%) reported that their case manager offered them no education.

The majority of clients (46%) reported that their case manager *always* or *often* asked them about their doctor appointments and lab work, while almost one-quarter said they asked *sometimes* or *rarely*, and one-third (32%) reported that their case manager *never* asked.

Two-thirds of clients interviewed (65.5%) reported that their case manager had talked to them about the importance of medical appointments, and that the information they provided was very helpful (mean=9.13 on a scale of 1 to 10). Fifty-seven percent of clients reported that their case manager had talked to them about the importance of dental appointments and found the information helpful (mean=9.08 on a scale of 1 to 10). Two-thirds of clients (67%) reported that their case manager talked with them about the importance of treatment adherence and found the information helpful (mean=9.34 on a scale of 1 to 10).

When asked if they had needs that were not being met by their case manager, 63.9 percent responded “no.” The 36.1 percent who said “yes” reported a variety of needs, including additional financial assistance for housing, utilities, medication, transportation, and food. Also reported were additional services not offered by their case management agency such as support groups, dental care, and transportation services.

A follow up question asked clients what they would change about their case management if they could; clients’ responses indicated that they would like more contact with their case manager or for their case manager to be able to spend more time on them when they needed help, better food services, more transportation, and to offer a support group. In nearly 10 percent of the client interviews (n=8, 9.5%) specific criticisms were noted about particular case managers and particular agencies, indicating the perception that some case managers have favorite clients and some are not professional or respectful of clients.

Current Services Received. A series of questions asked clients, “In the past 12 months, has your case manager talked to you about the following services?” The responses of the clients who answered “yes” are summarized in Table 8 below.

A final question asked clients in the last 12 months, how often their case manager had asked about their medications and how they take them (including non-HIV medication); over one-third of clients (36.1%) responded their case manager asked *often* or *always*, and 18.1 percent said they asked *sometimes*. The remaining 45.7 percent of clients said that their case manager *rarely* or *never* asked about their medications.

Table 8: Services Discussed with Case Manager in Past 12 Months

Service	Percent who Discussed	Information Discussed Most Often
Help getting medications	63.9%	Assistance is available for signing up for programs and getting help with medications
Food bank or voucher	59.5%	Some agencies have food pantry or vouchers; other refer clients to churches or other resources or give gift cards
Transportation to doctor or dentist	58.3%	Some agencies have transportation service or vouchers; some do not and try to find services for clients
Seeing the doctor	53.3%	Reminders to keep appointments and the importance of seeing the doctor regularly
Seeing the dentist	53.3%	Referral and support are available; transportation can be arranged
Education about risk reduction	52.4%	Ask about risk practices; advise to abstain or use condoms; discuss talking with partner
Talking to someone about ways to eat healthy	51.2%	Important to eat well and referrals to dietician or nutritionist
Education about HIV	50.0%	Basics of HIV disease; new information on treatment; offers literature, but experienced clients report knowing as much or more than case manager
Assistance with mental health issues	50.0%	Referrals to counselors or psychiatric treatment
Emergency assistance for rent/utilities	50.0%	Provided assistance if needed or referred; some agencies do not have funding for this service
Getting help with eye care	47.6%	Whether services are available; help finding services and scheduling appointment
HIV medications	46.7% ¹	Asking about adherence to regimen; assuring clients are getting refills on time and not missing doses; how to adjust to side effects
Last doctor's appointment	46.4%	Checking up on how client is doing and asks if they have questions about lab results, medications, or anything doctor told them
Assistance with alcohol or drug issues	35.7%	Referrals to services available

¹ This statistic is out of the 90.4% of clients who reported taking HIV medications.

Help getting into housing	32.1%	Information about what types of assistance are available and how to get it; much responsibility on the client to get housing services
Help paying for insurance	27.5% ²	Help with paperwork for Medicare or Medicaid; one agency pays the premium
Translation services	18.2% ³	Clients reported their case managers were bilingual and translated for them if needed

Final Comments. The respondents to the survey were given the opportunity to add any additional comments they wished. Of those who did, the vast majority of comments were that they appreciated the help they got and were satisfied with services and regretted but understood the lack of funding that limits what is available. However, several clients were specific in their criticism of their case managers and the organizations that served them, indicating a good deal of variability in the experiences of clients, even within the same agency. This may suggest a need for more standardized training and service protocols among agency staff.

Case Management Online Survey

The purpose of the on-line survey was to assure that all Ryan White funded agencies had an opportunity to participate and provide input about the current status of case management in Texas and to gather basic characteristics about all agencies in the system.

Sampling Methodology

DSHS in conjunction with BVCOG, devised the survey and posted it on Survey Monkey. The questions were designed to gain a better understanding of how each agency was operating and staffed, as well as to gain insight on current practice and tools utilized. All case management agencies were invited to participate and complete the survey anonymously.

A total of 33 agencies completed the agency survey. The survey included 66 variables on topics including basic agency characteristics, training and professional development, the future of case management, case load, case management activities, and case manager supervision.

Basic Agency Characteristics. This section of the survey asked respondents to provide an overview of the composition of their case management staff.

When asked how many case managers were employed with their agencies, the mean number of full-time equivalents was 5.48, with an average of 5.52 individuals providing services. The number of individual case managers ranged from a low of one to a high of 34, but only one agency employed more than 10.

Agencies were asked about their case managers’ educational and disciplinary backgrounds. The majority of case managers were reported to have bachelor’s degrees (n=106), with the remaining having had some college (n=42), master’s degrees (n=32), and several with a high school diploma or GED (n=18). Only seven agencies reported having case managers with a high school diploma or GED; 13

² This statistic is out of the 72.3% of clients who reported having insurance.

³ This statistic is out of the 13.1% of clients who reported that their preferred language is not English.

agencies reported having case managers with master's level training. The majority of agencies (n=29) employ case managers with bachelor's degrees. When asked about their disciplinary background, the majority of case managers were reported to have been trained in social work (n=74). The next largest groups were trained in nursing (n=22) and mental health counseling (n=22), with others trained in substance abuse counseling (n=17) or another allied health field (n=12). Other disciplines represented included psychology, sociology, business, human resources, health education, and public health.

When asked about the years of experience of their case managers, the majority (n=100) had over 5 years' experience in case management; 54 had three to four years of experience, and 28 had two years or less. Thirty-one of the 33 agencies responding had at least one case manager with five or more years' experience in case management. More specifically, 70 case managers were reported to have five years or more of HIV case management, 49 had three to four years, and 63 had two years or less. Twenty-eight of the 33 agencies responding had at least one case manager with five or more years' experience in HIV case management.

The final question in this section of the survey asked about the setting in which case management services are provided. While the majority of agencies reported providing case management co-located with a clinical setting (39.4%), about one-third (30.3%) have stand-alone agencies, and another 30.3 percent offer their services out of another social service agency or in multiple venues.

Training and Professional Development. This section of the survey asked about the training required of case managers, as well as the opportunities they have to receive training within the agency and externally.

Twenty-three of the 33 agencies reported that they required a specific amount of training per year for their case managers, but the types of training required varied greatly. The most predominant types of required training included continuing education to maintain licensure or certification if they were nurses or social workers, and internally required training such as ethics, confidentiality, or policies and procedures. Those that reported hours required ranged from six to 24 annually.

When asked about the type of training provided to new case managers, the 30 agencies that responded indicated a variety of training protocols. Several agencies reported having some type of mentoring system, in which a new case manager would "shadow" someone with more experience, particularly in relation to the agency's specific policies and procedures. Many agencies offer an "HIV 101" course for new staff, as well as compliance training for using mandatory data management tools.

The final question in this section asked respondents "What additional professional experience development and/or continuing education could be used to improve your case management program?" The responses to this question fell into four broad categories: 1) professional skills; 2) content knowledge; 3) continuing education; and 4) networking. Several agencies reported the need for training in skills such as time management, stress management, boundary setting, interviewing skills, documentation, and confidentiality. Others reported the desire for routine opportunities to remain current on their knowledge of advances in HIV prevention and treatment, including treatment for those with co-occurring conditions such as substance abuse, Hepatitis C, or mental illness. As many of the case managers have some sort of professional certification or licensure, the need for training/education that meets their annual requirements for continuing education was expressed. Finally, a few agencies stated that they would benefit from opportunities to network with other case management organizations to exchange information and learn from what other programs are doing.

Future of Case Management. This section asked agency leaders about their impressions of how case management is likely to change in the near future. When asked how they expected the role of case managers to change over the next few years, the vast majority of respondents indicated their expectation for a much greater focus on medical issues and outcomes, as opposed to more social services and support.

A follow-up question asked what essential activities case managers would have to perform and what knowledge would be needed to meet changing job demands. Not surprisingly, the respondents reported that case managers must have a stronger command of the medical knowledge base related to HIV, medications, and resources available. Many respondents stated that the essential activities may change to a medical focus, but the activities of assessment, care planning, and resource coordination and referral would not likely change.

Case Loads. This section briefly asked agency leaders to report on the case loads of their case managers. The majority of agencies (73.3%) assign clients to case managers or case management teams; 20 percent of agencies reported sharing clients across case managers. Examining the case load per case manager, there was significant variation in the number of cases handled by individuals within different agencies, with some handling over 700 cases. The mean per case manager ranged from 86 to 132 clients (medians ranged from 61 to 88). Because the agencies did not give a standardized response, the reliability of these data are limited.⁴

Respondents were asked to estimate what percentage of their clients were high need (defined as “very complex cases with low levels of independent problem solving”) and low need (defined as “need minimal help; primary role is to provide access to resources, but clients are able to do their own problem solving, get to the doctor, and take their medications”). Some agencies reported as low as 20 percent of their clients were high need, with about half (n=18) indicating that more than half their clients were high need. The mean percentage of high need clients was 52.7 percent. In contrast, some agencies reported up to 80 percent of the clients were low need, with about half (n=19) indicating that less than half of their clients were low need. The mean percentage of low need clients was 41.3 percent.

The final question in the section asked how many client visits per year were required by the agency. Two agencies reported that they did not require any visits; the highest number of visits required was eight. The mean number of required visits was 2.7, with a median of two.

Case Management Activities. This section asked agency leaders to report on the activities that occur as part of the case management provided at their agency. A series of questions inquired about the frequency with which clients are screened for mental health, substance abuse, treatment adherence, and risk behavior and assessed what tools are used to conduct these screenings. It should be noted that at this point in the survey, the response rate dropped significantly and continued to decline from here to the final question; thus, the representativeness of the data reported is substantially decreased from the previous questions.

⁴ Respondents were asked to report the approximate case load per case manager, but if case loads were not assigned, they were instructed to divide the number of case managers into the number of case managed clients. In addition, one agency reported 34 case managers, but there were only spaces to report the case load for eight.

Regarding mental health, 25 agencies responded, and they all reported screening clients at least once per year; 60 percent of agencies screen once annually, and 24 percent screen twice annually (the maximum number reported was four). While considerable variation exists in the types of instruments employed to conduct screening, the most used tool is the Substance Abuse and Mental Illness Symptoms Screener (SAMISS); 37.5 percent of agencies reported using SAMISS. Other instruments in use include in-house developed tools, the PHQ9P, and the Family Assessment and Acuity Scale.

Regarding substance abuse, 25 agencies responded, and 24 of them reported screening clients for substance abuse at least once annually. Fifty-six percent of agencies screen for substance abuse issues once per year, and 25 percent screen twice (the maximum number reported was four). Again, the variability in tools used to conduct the screenings is significant, including SAMISS (32.0%) and other internally developed forms, the Addiction Severity Index, and the Substance Abuse Subtle Screening Inventory (SASSI).

When asked if clients are regularly assessed using an acuity scale, 88 percent of agencies (n=25) responded “yes.” While the majority reported assessing clients, the frequency of assessment and the tools used varied tremendously. The majority of agencies responding (n=17), the most common response is that clients are screened upon intake and “as needed;” the contextual information qualifying what “as needed” meant in each agency included “as major changes occur,” “during a crisis intervention,” “in a dramatic change in functioning,” and “as [clients’] situation changes.” From the agencies that indicated the acuity scale they used (n=13), there is no common tool among those agencies. The responses indicate that while three agencies employ a Department of State Health Services tool, the others are using locally-developed instruments or have instruments currently in development.

Regarding treatment adherence, all 25 agencies responding indicated that they assess their clients at least once per year, some every visit; three agencies reported using the ARIES questions, but the majority do not use a specific tool (n=15). Finally, case management agencies were asked about how often risk behavior is discussed with clients and whether a specific format or tool is used. Of the 26 agencies responding, the frequency of discussing risk behavior ranges from “as needed” (n=7) to “every time they meet with their case manager” (n=6).

A subsequent question asked if the agency’s case managers spend time and/or train their clients to be independent of “the system.” Not surprisingly, 25 of the 26 agencies responding (96.2%) reported that they do try to help clients become self-sufficient. In an effort to understand how case management activities flow, agencies were asked to report on how their case managers spend their time during a typical week and in what activities case managers typically engage when directly interacting with clients. Table 9 below presents the responses to how case manager time is allocated.

Table 9: How Case Managers Spend Their Time in an Average Week

Activity	Average # of hours	Range of responses	# Agencies responding
Direct contact with clients (phone, in-person, email)	31.4	12 - 60	n=26
Paperwork/ administrative duties	17.0	2 - 50	n=26
Coordination on client’s behalf (doctor office, pharmacy, etc.)	10.6	3 - 30	n=25
Providing transportation or distributing vouchers	3.6	0 - 10	n=19
Distributing food or food vouchers	2.9	0 - 10	n=18

In response to case managers' activities when directly interacting with clients (n=25), agencies were allowed to respond freely, and each defined their case managers' activities differently. Some agencies responded very generally: "assessing clients' needs" and "finding resources for clients." Others specified that their case managers helped clients with issues such as medication, doctor's appointments, housing, food, and transportation. Other activities included service coordination and educating clients on the disease, medications, and eligibility for resources available.

Case Management Supervision. This section of the survey focused specifically on case manager supervisors and their role in the agency. Across the agencies who responded, the case management supervisors manage from one program to a high of seven; the mean number of programs supervised was three. The level of experience for case management supervisors ranged from a low of two years to over 34 years; the mean years of experience was 17.0 years. Regarding educational background, one agency reported their case management supervisor had a high school diploma, but 15 years of case management experience in that agency. Ten supervisors were reported to have a bachelor's degree in fields such as social work or another social science (psychology, sociology), and 10 had Master's or other advanced degrees (MBA, nurse practitioner). In addition to their duties as supervisor, agencies reported their supervisors spent an average of 13.5 hours per week providing direct case management service to clients (median = 10 hours per week).

To conclude the survey, a series of open-ended questions about the role of case management and how it has changed were posed to respondents. Twenty-one agencies provided qualitative information characterizing their perceptions of case management, how services could be provided more effectively, changes in their agencies, and how they are moving clients to independence. Respondents described the role of case management from three distinct perspectives: 1) Client focused: the role of case managers is to assist clients in meeting their needs and helping them achieve independence; 2) Population focused: the role of case managers is to assure access to services and prevent transmission of HIV; and 3) Agency focused: the role of the case manager is to provide services professionally, effectively, and on time. To improve their performance in these areas, respondents stated that they needed additional funding, time, and training, and that increased collaboration among agencies would enable them to be more efficient. Other responses included the development of better tools and clearer definition of the boundaries of case management.

When asked to describe the differences between medical and non-medical case management, respondents (n=22) by and large characterized medical case management as being specific to health services (i.e. labs, medication) and non-medical case management as dealing with environmental issues such as housing, food, transportation, etc. Interestingly, several respondents commented that regardless of the differences, it was difficult to provide one without the other and that both were necessary to enable clients to be healthy and to achieve independence.

Several agencies reported that they have changed the way they provide case management in the past two years. While some simply say they are complying with directives from the Department of State Health Services, others elaborate that they have integrated and centralized case management services to offer services in a more efficient, coordinated way and to cover multiple areas of the client's needs simultaneously. They also reported making better use of the skill sets of their case managers by having case management teams to serve clients rather than individual case loads.

The final question asked agencies to discuss their perspective on how they can enable clients to be independent. The responses focused on three primary elements: clients' personal characteristics, education and training, and the relationship between a case manager and client. Several agencies indicated that there are some clients who are more predisposed to become independent with a little help and that there are others for whom independence is not ever likely. Most responses included some indication of the role of educating and training clients in particular skills, including life skills, navigation of the health care system, problem solving, and simply how to manage their disease. Finally, they discussed the interpersonal relationship between case managers and clients, highlighting the importance of encouraging clients to set goals and make decisions on their own, building their independence as they progress through treatment.

Summary

In summary, this study found similar issues in case management sites across the State of Texas. As with many state and federally funded agencies, lack of funding is a blanket problem reported not only by case managers, but by supervisors and clients as well. As mentioned throughout this report, frustrations among case managers and their supervisors focused on administrative duties such as paperwork occupying a substantial amount of time, diverting attention away from clients. Likewise, clients most often reported they would like to have more contact or time with their case managers in the client interviews.

A fairly uniform standard of care was seen across all sites studied. As one would expect, case management facilities located in a more urban area had greater resources to offer clients. Rural areas did not lack these same resources, however the provision or access to such services was limited by transportation issues for rural clients to more centrally located service providers; thus, rural providers had higher rates of working with clients on transportation issues as a precursor to accessing services.

Case managers and their supervisors exhibited great care and concern for their clients; client interviews reaffirmed this assessment with a majority of clients pleased with their case managers. Client needs were met as often as possible based on services or funding available. Nearly all case managers agreed that assisting a client in achieving self-sufficiency was the goal of case management services. The Case Management Standards of Care were seen as a guide that aligned the goals of medical and non-medical case management, and they were seen as a tool to creating a consistent underlying plan across agencies to care for HIV/AIDS clients.

DSHS Response

Case management is a heavily utilized service system which is not operating in the most efficient manner. The system developed and evolved over the years to meet the needs of clients who needed palliative care and has not responded to clients now living with a chronic disease. In most of the service delivery systems, the case manager must act as the gatekeeper to access services within an area. The result is an overly stressed system incapable of proactively addressing clients whose needs may fall outside of routine brokerage of services. The individuals providing case management are overburdened with clients who may not benefit from case management but are engaged in the service as an access point to other services. Case management practices vary in efficacy and consistency of practice and there is lack of documentation of adherence to the current DSHS Case Management Standards.

This study represents the beginning efforts of DSHS to conceptualize and implement new systems that better respond to client needs and environmental issues. DSHS views the purpose of case management as empowering clients and moving them to self sufficiency while increasing positive health outcomes. While some brokerage of service may be necessary to stabilize clients when contact is initiated, too often the relationship between case manager and client does not move beyond this dynamic. For this to be achieved, case management systems must shift from a focus of service brokerage to a training focus in which case managers teach clients how to access necessary services.

DSHS envisions a case management system in which the case manager is empowered to act as mentor, educator and advocate to those clients in most need of assistance -- a system in which case managers' time is spent engaged in activities that move clients out of crisis and into self sufficiency and better health. This system will ensure a high level of case management with a medical focus available to all clients who need it, as well as social case management. Clients may need to move between these to ultimately achieve independence. Staff who perform these different levels of case management will need the skills and background to assist clients with varying aspects of care including understanding medical treatments to maneuvering the complex system of state and federal assistance programs. This will necessitate creating new ways for lower acuity clients to access services that are currently being brokered through case managers. Agencies may need to create new staffing patterns which would include intake or advocacy positions to move the lower acuity clients off of case management rolls and into a system where their task to have payments made or vouchers given would be administrative.

In order to realize these changes, DSHS has begun developing and initiating trainings targeted at strengthening the practices of case managers across the state. DSHS also intends to revisit existing standards which regulate case management practices to determine what changes may be necessary to clarify the activities that are key to this service. Lastly, DSHS will continue to work with administrative agencies and providers to determine the effectiveness and needs of case managers, case management agencies and case management systems while keeping client need and health at the forefront of any implemented changes case management roles.

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Appendix B

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Appendix C

Literature Search

A search of the literature was conducted using PubMed and Google Scholar. The following is a list of search terms utilized to identify appropriate journal articles: case management, outcomes of case management, models of case management, approaches to case management, strengths based model of case management, case management licensure, case management certification, effects of case management licensure, effects of case management certification, outcomes of case management licensure, outcomes of case management certification, outcomes of case manager licensure, outcomes of case manager certification, case manager certification, case manager licensure, certification effects on client in case management, case management implementation guidelines, case management model fidelity, case management implementation fidelity, case management implementation evaluation, and case management program integrity. Articles that were not immediately available were ordered through the Texas A&M University library system, Edocs.

Appendix D:

Part B Participant Recruitment & Compensation

Case manager – client interactions were either in person or via phone call. It was noticed during the first on-site visit that many interactions took place over the phone. To capture the phone-based case management, the client was read a statement by the case manager and asked their consent to participate in the study. If the client consented, the call was recorded. All calls were later listened to by Brazos Valley Council of Governments (BVCOG) staff and coded on the observation instrument. Because

of the limited number of in-person visits at many sites, all in-person sessions were observed with client consent. The DSHS set a minimum of five observations per site, with the goal of observing as many sessions as possible, without distinction between in-person or phone-based sessions. For those with limited or no English proficiency, a Spanish speaking observer was able to complete the observation. Each observation was coded with a unique ID number that did not identify the client or case manager in any way.

Chart reviews were based on a randomized sample generated by DSHS using the AIDS Regional Information and Evaluation System (ARIES). Clients that were active for the preceding 18 months as of April 2008 were selected as the eligible study group. From those, DSHS developed a random list of 20 charts for review at each site. Charts were reviewed as time permitted; charts were reviewed for the time period September 1, 2006 to October 31, 2007. It was thought that this would be a long enough time period for yearly activities to appear in case notes and in the file. Since the on-site research portion was to take place in the early half of 2008, this time period was selected to have allowed sufficient time to pass for the completion of data entry into all client information files.

Interviews with case managers and supervisors were conducted while on-site and as time permitted. All case managers and supervisors were interviewed. Each had the opportunity to opt out of the interview and oral consent to be recorded was given.

Interviews with clients were conducted by phone. The DSHS developed a list of all active clients of a visited agency, age 18 and older, that were willing to accept mail, as indicated in ARIES. The DSHS mailed a letter asking clients to call a toll-free number to participate in a structured interview about the case management they receive. After an agency was visited by research staff, the agency's clients were mailed the letter. A Spanish speaking interviewer was able to take calls from those with limited or no English proficiency.

The last component was an online survey to be completed by Part B funded case management agencies in Texas. Part B Administrative Agents were emailed by DSHS with a request to send to each of their case management providers a link to an anonymous survey. Case management providers could opt-in to take the survey.

All components of the project were assigned a unique identification number allowing for client, case manager, or supervisor anonymity. No tangible reinforcements or other compensation were offered to any of the study participants.

Appendix E: Rural-Urban Classification

2003 Rural-Urban Continuum Codes	
Code	Description
Metro counties:	
1	Counties in metro areas of 1 million population or more
2	Counties in metro areas of 250,000 to 1 million population
3	Counties in metro areas of fewer than 250,000 population
Nonmetro counties:	
4	Urban population of 20,000 or more, adjacent to a metro area

5	Urban population of 20,000 or more, not adjacent to a metro area
6	Urban population of 2,500 to 19,999, adjacent to a metro area
7	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area

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