Interagency Service Systems for Seriously Emotionally Disturbed Children in Six Iowa Counties

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I. Background

Background

A National Program of Services Improvement for Seriously Emotionally Disturbed Children and Adolescents

The goal of the federal Child and Adolescent Service System Program (CASSP) initiative is to reframe the traditional concept of children's mental health services. This reconceptualization is based on the idea that the effectiveness of service systems, as opposed to the effectiveness of single services, is a consequence of thinking "ecologically" (Whittaker, Schinke, & Gilchrist, 1986), meaning that the effect of mental health treatment on individual children is believed to result from factors associated not only with therapists, but with organizations, and with inter-agency systems of services at the community level.

This new approach was partially the result of a number of policy shifts that occurred during the past decade and a half.

1974 The Juvenile Justice & Delinquency Prevention Act shifted a significant number of adolescents from the juvenile justice system to the social service and mental health systems.

1975 P.L. 94-142, mandating "free and appropriate education for all handicapped children," was passed, making community educational systems an important part of child mental health services for the first time.

1980 The Adoption Assistance Act was passed, mandating placement prevention and reunification services to children in order to avoid foster care "drift." Further, the child welfare system provided an increasing share of the costs of residential and foster care for these children (Kimmich, 1985).

1981 The dismantling of the federally financed community mental health centers (Part F of P.L. 91-513, 1970 Amendments) further scattered responsibility to a welter of state and local mental health organizations, most of which were focused on adult populations.

This complex of events set in motion a number of trends:

(1) The number and rates of children admitted to psychiatric in-patient facilities and residential treatment facilities increased dramatically during the 1980s (Thomas, 1989). Stays were shorter, but many more children were placed in secure treatment settings.

(2) The number of multi-problem children receiving care and treatment in the educational, child welfare, and juvenile justice systems also increased rather markedly. The fact that a child was served by one rather than another of these systems, however, was often an artifact of chance (Kamerman & Kahn, 1990), rather than a result of assessment or planning.

(3) The status of children in the United States deteriorated during the 1980s. Children living in poverty increased from 15% to 20% of all children, and those living in lone mother families increased from 18% to 21% (Kamerman & Kahn, 1990). As the Code Blue Report (1990) of the American Medical Society documented, this is the first generation of children that is less healthy than its parents.

The effect of these trends was to worsen the fragmentation of children's services and diffuse the responsibility for solving systemic problems. This failure of public policy was documented by Knitzer in her influential report entitled Unclaimed Children, The Failure of Public Responsibility to Children and Adolescents in Need of Mental Health Services (1982), which generated much interest in reframing the delivery of mental health services for children.

The Child and Adolescent Service System Program (CASSP) was created by the National Institute of Mental Health (NIMH) in 1983 as a means of addressing some of these problems. It was conceived as a program that would improve community systems of service delivery for severely emotionally disturbed (SED) children and adolescents. The goal of CASSP was to change the way in which services to these children are delivered in the United States.

The CASSP initiative, since its creation in 1983, has been further stimulated by research findings indicating that almost all SED children and adolescents have multiple problems (Melton & Hargrove, 1989). For example, most of these children exhibit substantial educational delays (Rutter, 1985), have dysfunctional families (Emery, 1988), often are abused and/or neglected and live in disorganized communities (Liem & Rayman, 1982; Links, 1983), and have mentally ill parents (Feldman, Stiffman & Jung, 1987). The focus for improving mental health services for children must be, therefore, on delivering multiple services effectively and efficiently at the community level (Dryfoos, 1991; Friesen, Griesback, Jacobs, Katz-Leavy & Olson, 1988).

Because the majority of SED children and adolescents are multi-problem, the CASSP program encourages inter-agency planning and coordination as well as the development of a strong mental health component within the broader child welfare system. The primary purpose of the CASSP program, therefore, is to improve the system through which child mental health services are delivered, rather than to create or demonstrate new service modalities (Coron, 1983).

Improvement of Services for SED Children in Iowa

The State of Iowa, Department of Human Services, Division of Mental Health, Mental Retardation, and Developmental Disabilities (MH/MR/DD) was awarded a CASSP Grant for a three year period ending September 31, 1989. These funds were used to:

- develop a state level focus on the CASSP population;
- encourage inter-agency collaboration at the state level;
- increase the data base on the CASSP population and service providers;
- build constituency groups; and
- provide training and technical assistance.

During the course of the initial three year period, a number of statewide planning activities were undertaken, and five local initiatives were funded by the state program. These grants to local communities were used in a variety of ways, all of which were intended to build and strengthen county level mental health service systems for children and adolescents.

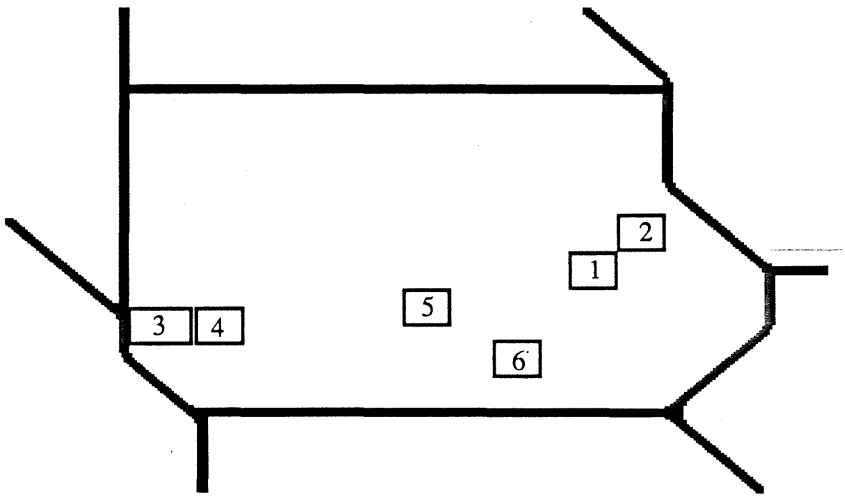
Fourth year funding from NIMH required the State to include an evaluative research component to be carried out by University personnel. When the State of Iowa received its fourth year grant, the research was subcontracted to the University of Iowa School of Social Work.

A Study of Systems of Care for SED Children in Iowa

The primary focus of the research project was stipulated by NIMH: a determination of whether the CASSP program has had a positive effect on the system of services for SED children and adolescents. This is, of course, a difficult question to answer in a definitive way, because baseline data were not collected prior to the award of the county grants. It was decided, therefore, that the primary objective of this initial research project would be descriptive—to produce detailed descriptions of the county CASSP service systems and the accomplishments of the CASSP grants. This approach would provide quantitative and qualitative information about the impact of the grants, from which recommendations could be drawn. Further, it would provide baseline data for any future research which might be undertaken.

The research design for this study of child mental health systems in Iowa utilized a single system case study approach (see Appendix A for the methodology of the study). Funds available for the evaluation were not sufficient to assess the CASSP program statewide; it was therefore decided to study four counties that had received CASSP grants and four that had not received CASSP grants in an attempt to determine whether the grants had made a difference. During data collection, the researchers encountered some agency administrators who were unable or unwilling to provide the necessary information. Because of these barriers, as well as time and financial constraints, this final evaluation report contains six case studies—three counties that received CASSP grants (Cass, Delaware, and Polk Counties) and three that did not receive CASSP grants (Linn, Pottawattamie, and Wapello Counties).

Geographic Location of the Six Study Counties



1 = Linn County
2 = Delaware County
3 = Pottawattamie County
4 = Cass County
5 = Polk County
6 = Wapello County

Data collection occurred in two phases. First, initial interviews were conducted with administrators. The information gathered in these interviews concerned the history of mental health services for children in the county and the county's efforts to improve and coordinate the system. Second, two survey questionnaires that collected quantitative data were administered—one to staff and one to administrators. These two instruments were designed to measure perceptions regarding characteristics of SED children in the county and the degree to which services to them are comprehensive and effective.

In total, responses from 25 administrators and 122 staff persons are included in this report. The outcomes of the data collection process for each county are shown below.

Responses from Agencies and Individual Administrators and Staff

	Cass	Delaware	Linn	Polk	Potta-wattamie	Wapello	Total
Number of agencies included in study	6	8	16	17	11	13	71
Number of Surveys from Administrators	6	6	11	13	13	12	61
Number of Surveys from Staff	13	16	65	93	110	43	340
Total Number of Surveys	19	22	76	106	123	55	401

The organization of the evaluation that follows includes first a summary report of the study, then the six individual case studies. The case studies were prepared to be read as separate documents—to stand on their own—so that interested individuals can read the description of their county SED system without wading through a lot of material on other counties. This means, of course, that there is redundancy in the material presented, and for this the authors apologize to the reader who wants to read the entire document. The summary findings chapter, which summarizes the material and makes cross county comparisons, should be of interest to everyone.

II. Summary

Summary Findings

The purpose of this assessment of the CASSP program in Iowa is to describe the county CASSP projects and to evaluate the degree to which they had an impact on the development of effective and coordinated service systems for the severely emotionally disturbed child and adolescent population in their counties. As the conclusions of each case study indicate, the CASSP grants did indeed have a positive effect on mental health services for children and adolescents. The effects are summarized in this section.

Finding #1. Effects of CASSP grants.

Respondents in counties that received CASSP grants indicated more positive attitudes about the extent and direction of change in their SED systems than did respondents in counties that did not have CASSP programs.

One important focus of this assessment is to determine whether the CASSP grants had the effect of improving the "systemness" and quality of services in community-based service systems for SED children. As noted in the introductory section of this report, it is difficult to assess change in systems in which it has been impossible to obtain a baseline measure. A rigorous assessment of change requires a minimum of two measurements taken at two points in time, one prior to the planned change intervention and one after the event. Two measures were not possible in this study.

As a substitute, administrators and staff in counties that had received a CASSP grant were asked to recall the state of their interagency system of services for SED children prior to the receipt of their CASSP grant and to rate their system on a number of dimensions. A comparison was obtained by asking administrators and staff in counties that did not receive a CASSP grant to rate their system three years prior to the time the survey was taken. All respondents were then asked to rate their systems on these same dimensions at the present point in time. The difference between the two scores was taken as a measure of the degree to which respondents believed their system was "worse off", or that their system had experienced "no change", was "little improved", "somewhat improved", or "much improved" between these two points in time The raw scores resulting from this process are shown in Table 2.1 for the CASSP counties and the comparison counties.

As can be observed from Table 2.1, administrators and staff in counties that had CASSP grants consistently expressed more positive opinions of the direction and extent of change in their systems of care for SED children than did their counterparts in counties that had not received CASSP grants. On every single item, when scores were averaged across all respondents, the means of the difference scores from the CASSP counties were higher. It should be noted, of course, that all of these scores, with only four exceptions, fall into the "little improvement" range, which could be taken to mean that the effect was not great. On the other hand, it can be argued that three years is a very short period of time for system improvements to be implemented and that any gain is significant.

Table 2.1 Means of the Difference Scores, Averaged for Counties Which Did and Did Not Receive CASSP Grants

	Three Counties Which Did Receive CASSP Grant[1]	Three Counties Which Did Not Receive CASSP Grant[2]
In regard to the dimensions that are necessary for an interagency service system to operate well, the SED system has the following characteristics:		
Accessible	.64	.48
Available	.67	.31
Well Coordinated	1.09	.28
Integrated	.86	.48
Services are Standardized	.48	-.03
Services are High in Quality	.77	.38
System is Capable of Further Improvement	.23	-.38
In regard to the qualities that are necessary for services to be effective, services for SED children and adolescents exhibit the following characteristics:		
Early Identification	1.06	.93
Family-Centered	.77	.61
Community-Based	.68	.54
Individualized to Needs of Child	.73	.36
Least Restrictive	.82	.61
Family Participates	.73	.51
Smooth Transition to Adulthood	.23	.11

Note: Numeric cut points for Difference Scores were:

-2.00	to	-1.00	=	"worse off"
-.99	to	.00	=	"no change"
.01	to	1.00	=	"little improvement"
1.01	to	2.00	=	"somewhat improved"
2.01	to	3.00	=	"much improved"

[1] Cass, Delaware, and Polk Counties received CASSP grants.
[2] Linn, Pottawattamie, and Wapello Counties did not receive CASSP grants.

On the whole, this is a positive result. It provides some evidence that "top down" inducements for system improvement can have a positive effect in communities that are capable and willing to respond. The three CASSP counties, in the opinion of those most involved, have made substantial improvements in the ways that severely emotionally disturbed children are treated in their communities. It needs to be stressed here that these are not unimportant accomplishments, given the small size of the grants and the equally short time frame. Regardless of what planners would like to think, substantial changes in service delivery take time and resources. As we documented in the case studies, the results of the CASSP county grants were well worth the small investment.

It might be argued, of course, that another plausible explanation for this finding is that the results were skewed because Polk County, the largest and most advanced of the counties, was among the counties that received grants and thus the Polk County difference scores are acting to increase these averages. This possibility is dealt with in the next finding.

Finding #2. Effects on rural versus urban counties.

The rural counties were more affected than were urban counties. Respondents in rural counties indicated more positive attitudes about the extent and direction of change in their SED systems than did urban respondents.

As Table 2.2 shows, the differences in Table 2.1 appeared in spite of relatively low scores from Polk County. These results show that, overall, administrators and staff in rural counties had more positive opinions about improvements in their systems than did their counterparts in urban areas.

Table 2.2 Means of the Difference Scores, Averaged for Rural and Urban Counties

	Three Rural Counties [1]	Three Urban Counties [2]
In regard to the dimensions that are necessary for an interagency to operate well, the SED system has the following characteristics:		
Accessible	.85	.36
Available	.75	.27
Well Coordinated	.75	.39
Integrated	.80	.55
Services are Standardized	.50	.30
Services are High in Quality	.45	.61
System is Capable of Further Improvement	.00	.19
In regard to the principles that are necessary for services to be effective, services for SED children and adolescents exhibit the following characteristics:		
Early Identification	.90	.97
Family-Centered	.68	.68
Community-Based	.74	.52
Individualized to Need of Child	.63	.45
Least Restrictive	.84	.61
Family Participates	.58	.61
Smooth Transition to Adulthood	1.00	.16

Note: Numeric cut points for Difference Scores were:

-2.00	to	-1.00	= "worse off"
-.99	to	.00	= "no change"
.01	to	1.00	= "little improvement"
1.01	to	2.00	= "somewhat improved"
2.01	to	3.00	= "much improved"

[1] The three rural counties are Cass, Delaware, and Wapello.
[2] The three urban counties are Linn, Polk, and Pottawattamie.

On ten of these 14 items, the rural respondents felt more positive than, or at least as positive as, their urban counterparts. The only dimension in which urban respondents indicated a significantly higher assessment was in regard to the quality of their mental health services. This finding was corroborated many times in our interviews with rural administrators, who constantly worry about attracting qualified staff and about the service gaps in their systems.

In addition to this overall assessment, it is also possible to draw some broad conclusions about the nature of county systems by comparing the qualitative and quantitative data from the three counties. Although the CASSP program as a whole has been beneficial, it has had differential effects at the county level.

Finding #3. Comprehensiveness and accessibility of systems.

Systems in urban counties are more comprehensive, yet SED children in rural counties have better access.

The single case studies of the six counties that follow include detailed information about the number and type of mental health services available in the counties (or by referral to adjacent counties) for children needing treatment. This information is summarized in Table 2.3.

Table 2.3 Measures of SED Populations and SED Services in Six Iowa Counties

	Cass	Delaware	Linn	Polk	Potta-wattamie	Wapello
Size of SED population	298	424	3,319	5,624	1,749	707
Estimated % of SED children receiving service	.76	.39	.47	.54	.81	.83
Proportion of core services available	8/10	4/10	10/10	10/10	8/10	6/10
All Support Services available?	NO	NO	YES	YES	YES	NO

Table 2.3 indicates there are important differences when comparing the six counties. The most obvious is the difference in the estimated size of the SED population—Polk County's SED population is about 15 times greater than the SED population of either Cass or Delaware County, and this does not include children from adjacent counties transported to Polk County hospitals and clinics. These figures establish, then, the basic nature of these systems. The Polk County system is far larger, more complex, and differentiated than are the rural systems.

In regard to the availability of services, the rough measure we developed for the case studies shows that the rural systems reach the largest percentage of potential SED clients, in spite of the fact that the rural counties have significant gaps in the availability of core services. These percentages are, of course, a function of the small size of the client pool and the current case loads

of the services available in the county, which may be very high. Cass County, for example, with a very small population and a relatively well developed system (8 out of 10 core services), may be reaching approximately three-quarters of the children needing service. Polk County, by contrast, may be reaching more than one-half of those in need even though it has available all 10 of the core services. Unfortunately, the Delaware County system is the least able to respond: Delaware has about 424 SED children but only a little over one-third appear to be receiving services.

The goal of the federal CASSP program is to build interagency systems so that the children in need of mental health services will receive them. The CASSP program was initiated in 1982 when Knitzer estimated that two-thirds of SED children were not receiving the services they needed (Knitzer, 1982). In light of this statistic from the early 1980s, it appears that all except Delaware County have made important progress in developing child mental health systems. Delaware County, however, is still extremely resource poor and should become a focus for further development.

Finding #4. Structural characteristics of the systems.

The small (rural) interagency service systems are each more tightly linked by referral relationships and are less dominated by one or a few of the member agencies than are the urban systems.

Table 2.4 Measures of Structural Characteristics of the Six Systems

	Cass	Delaware	Linn	Polk	Potta-wattamie	Wapello
Number of agencies	6	8	16	17	11	13
Number of Linkages (each linkage is a one way referral channel reported)	30	22	43	99	37	70
Density of Linkages (number of referral channels divided by square of number of agencies)	.60	.34	.25	.34	.31	.42
Centrality (degree to which one organization dominates the referral channels)	.03	.20	.28	.44	.27	.23

The six counties differ in the size and complexity of their networks. As shown in Table 2.4, Cass is the smallest and least centralized with the most dense referral relationships; the urban counties are much larger, more centralized, with less dense referral interactions. Such an

association between the size of the network and both the centrality and density of interactions is to be expected. As the number of agencies in a network increases, the number of possible linkages increases exponentially (size squared), but for efficiency reasons the number of actual referral relationships cannot easily increase at the same rate. With a lower proportion of linkages, the density of a larger network is smaller. At the same time, the centrality is likely to be higher because additional organizations typically relate to only a few (central) organizations.

As detailed in the case studies, the most dominant agency in all of the systems is the Department of Human Services, which provides intake and management of a wide range of social and clinical services (through referrals). The schools (or the Area Education Agency) and the Juvenile Court, which also have a role in intake, referral and management of a significant number of cases, are secondary central organizations in each of these counties. Key service agencies and treatment facilities take a third central role depending on local circumstances.

The association between system size, the degree to which systems are tightly linked (density of referral relationships), and centrality is an important one. In Cass and Delaware counties there are few agencies and, for this reason, workers tend to know the staff of other agencies and tend to refer to all available services. In counties such as Polk and Linn, because there are so many agencies and services, workers tend to focus their referrals on a limited number of agencies (a fairly small percentage of potential referral sources). This finding, although rather academic, has an important influence on the ease with which coordination can be accomplished within interagency systems.

Finding #5. Coordination effort.

The CASSP grants appeared to stimulate administrative coordination but not case coordination.

Table 2.5 Measures of Case Coordination and Administrative Coordination Effort

	Cass	Delaware	Linn	Polk	Potta-wattamie	Wapello
Case Coordination Index	1.90	1.52	1.73	1.16	1.92	1.98
Administrative Coordination Index	1.66	1.47	1.45	1.59	1.59	1.48

Table 2.5 shows that the case coordination index and the administrative coordination index for the six counties studied varied significantly. Overall, there appeared to be a higher level of case coordination (overall mean 1.70) than administrative coordination (overall mean 1.54). It should be noted, however, that if the means are grouped as they were in Table 2.1, according to whether the county had received a CASSP grant, an interesting observation emerges. The mean index for administrative coordination for counties that had a grant (mean = 1.57) is somewhat larger than for those that did not (mean = 1.51). This is evidence that the grants gave administrators the chance to meet together and plan their joint projects, which in turn had an impact on how well respondents felt their system was coordinated at the systems

level. On the other hand, the mean index for case coordination is considerably higher (mean = 1.88) in counties that did not have a grant than in those that did (mean = 1.53).

Why should this be the case? From the data we can surmise that the very low case coordination score for Polk County is pulling down the overall mean. Why should the largest system, one rich in services, be perceived by workers as having such a low level of case coordination? What are the factors that prevent a fully developed service system such as the one in Polk County from integrating multiple services so that children with multiple problems receive coordinated and integrated care? Why should it be harder to achieve this objective in Polk than in Cass?

Here is one answer: The larger and more complex a system becomes, the more difficult it is for workers to coordinate services across organizational boundaries. The Polk County system is comprised of many tertiary institutions that provide highly professional and intensive treatment. It is very costly for these highly trained professionals to spend the time necessary to coordinate their treatment simultaneously with other staff in other agencies. This means, however, that case coordination among organizations in large systems can be very problematic. This observation leads to a number of recommendations.

Summary Recommendations

Putting together the findings outlined above, we offer several general recommendations.

Recommendation #1. To improve systems of care for Iowa children who are severely emotionally disturbed (SED), all levels of government will have to place renewed emphasis on developing systems of care for SED children and adolescents.

This study documents a consensus among mental health administrators and staff that the number of children with mental health problems is increasing, and that the severity and duration of their mental illnesses are also increasing. Because the federal government abandoned financial support of community mental health centers in the early 1980s, and because the state of Iowa has made mental health services the sole responsibility of counties, most communities in Iowa are ill equipped to respond in a comprehensive manner. This evaluation estimates that the percentage of SED children receiving services in the six counties studied ranges from 39% to 81%. Only the largest counties in the state have a population large enough to have developed the ten specialized services needed by seriously mentally ill children (e.g., day treatment, intensive in-home treatment, therapeutic foster and group care). To make the core services available to all Iowa children will require the combined resources of federal, state, and local governments. For combined resources to be effective in improving systems of care in Iowa communities, there will have to be vertical coordination between these levels of government.

Recommendation #2. Further, efforts to improve mental health services for children will require a planning capacity at the state level and must take into account the vast differences among Iowa counties.

The Department of Human Services should have the capacity to develop a state-wide plan for systems of care for SED children. This planning process must be interdepartmental and must include the Adult, Children and Family Services and MR/DD/MH divisions, as well as representatives from Community Mental Health Centers, Area Education Agencies, Juvenile Courts, and advocacy groups. The outcome of this planning process must differentiate between rural and urban areas. In rural areas, such a plan would identify regions within which systems of care could be developed around Mental Health

Centers as the centralizing focus. In urban areas, the Decat projects should be used to improve the "systemness" of services for SED children.

Recommendation #3. The goal of mental health planning for rural areas should be to assure access to core services to all SED children who need them.

Mental Health Centers in Iowa have been woefully underfunded. There are counties, like Delaware, that do not have a Center. We doubt that significant progress can be made in improving care for SED children until rural catchment areas have a designated Mental Health Center, and until they have the capacity to outpost services to remote county towns via traveling teams of mental health professionals. Teams could provide consultation to the staffs of schools, juvenile courts, and family service agencies, as well as provide outpatient treatment to children and families.

Recommendation #4. The goal of mental health planning for children in urban areas should be to improve the function of the interagency system that is already in place through centralized diagnostic services and case management.

Mental health services for children are probably more complex than any other type of children's services because they are funded by more sources: Title XIX, private insurers, child welfare programs, county funds, juvenile justice funds, etc. It is axiomatic that services develop where the money is. Thus, psychiatric and residential programs have expanded in recent years, with little attention to integrating them into the existing system and without concomitant emphasis on "sub-acute" and preventative care.

Many persons interviewed in the course of this study expressed the opinion that what is needed now in the urban areas is improvement at the "front end" of the system--at the point of entry into care for mental health problems. They envision a single point of entry, at which high quality screening and diagnostic programs are available, and they say that until this is available, appropriate and least restrictive care will be an unmet objective.

As we demonstrated in Table 2.5, coordination of cases in urban areas is far more problematic than in rural areas. Improvement in functioning of large systems, therefore, requires that case management be available in a centrally designated organization for those children who have multiple service needs. Case management has become a core service in mental health systems for adults; it should now be developed where needed for children.

Recommendations for the Three Counties That Received CASSP Grants

Cass County. This network is small, decentralized, relatively well developed, and an apparently well functioning system with a high degree of interaction and coordination effort among the service organizations. The presence of a Community Mental Health Center in this small rural county means that a range of core services is provided which is sufficient to allow the network to function as a system. This system differentiates interaction patterns into three groups representing schools, social and behavioral services, and treatment services. The process of coordination and collaboration among these groups is working relatively well.

Recommendations:

(1) Cass County SED children need the core services not currently available to them, and every effort should be made at the state and county level to develop these services.

(2) The planning and prevention activities initiated by the CASSP grant should be made permanent, and state funds should be made available to match county public and private funds.

Delaware County. This is a small, resource poor county with insufficient child mental health services. It does not function as a system. Three of the organizations that provide core services are outside the county. As such, services are relatively decentralized, with low density of interaction and little effort to coordinate services for a small population. The structure is differentiated into two central referral points (one for schools and human services and the other for the court) and three assessment/treatment groups (behavioral, psychiatric, in-county social services). Major problems were reported with the process of coordination between the in-county and the out-of-county service groups.

Recommendation: Delaware County (and other similar counties in Iowa) need access to core services for their SED kids, particularly outpatient treatment. The most desirable solution, although probably not a realistic one, is the establishment of mental health centers in all 99 counties. In lieu of this solution, it is critical that regional planning be undertaken to delineate child mental health catchment areas and to determine the volume of services necessary within each and the financial incentives and support required by the currently established centers so that they may adequately serve these currently underserved counties. This should be a top priority of the State.

Polk County. This urban county contains a well developed, large, highly differentiated, and reasonably well coordinated service network. The complex system contains a complete range of core and support services for SED children. The network is characterized by moderately high levels of interaction among participating organizations and moderate centralization for a network of this size. Like Delaware, the structure is differentiated into a system with two central referral points (one for schools and human services and the other for courts). Several groups of organizations that provide assessment/treatment are more highly differentiated than those found in the smaller counties. Services for the older, more severe, legal cases are delineated from those for less severe, younger, social services cases. The process of coordination among administrators was relatively well worked out and the level of effort high, given the nature of the network.

The problems reported by Polk County staff were no greater than those reported by staff in the smaller counties. Especially important to the functioning of the Polk network was that the relationships among the sub-groups of organizations were relatively well understood and accepted, and they appeared to be functioning well. This is in contrast to the level of integrative effort among workers, which appeared to be relatively low. The complexity and differentiation among services make case coordination problematic in this system.

Recommendation: Polk County should place emphasis on improving the amount and quality of case coordination that occurs across organizational boundaries. This does not mean that every SED patient requires an interagency intervention team. Given that many Polk County services are residential, many children will continue to experience sequential handling. We do recommend, however, especially with multiple problem children, that inter-agency staffings and

case management services should be increased as much as possible. When face-to-face integration is not possible, then SED children should receive referral services that provide comprehensive, accurate, and timely information to accompany the child as he/she progresses from one agency to another.

III. Case Study of SED Service System in Cass County

Cass County
SED Service System

Cass County is a rural county, with a total population of 16,932, located in western Iowa south of the mid-line between Des Moines, the capital, and the Omaha-Council Bluffs metropolitan area. It has one population center, Atlantic, which is the county seat. With its small population, Cass County has a small number of human service organizations that serve seriously disturbed children and adolescents.

Activities and Accomplishments of the CASSP Grant

This is a study of mental health services and treatment programs for children that reside in Cass County, Iowa. It incorporates information about child mental health services and the system of care in this county. It is not meant to be an exhaustive study, but is a profile and sketch of the subject. It should be remembered that this is cross sectional data collected in the spring of 1990 and, as such, is a snapshot of only one point in time. Interorganizational systems are organic and ever changing.

The CASSP Project in Cass County was initiated by Carol Garvis, a coordinator at the Area Education Agency, who noticed that an increasing number of children and adolescents were coming to her to talk about suicide and that an increasing number were running away. Carol called together a group of people from various human service agencies: Alcohol and Drug Assistance Agency, DHS, Northwest Iowa Mental Health Center, AEA, Atlantic and Griswold Schools, Cass County Memorial Hospital, and Lutheran Social Services.

At the initial meeting, there was agreement that the county had serious gaps in mental health services, especially for problematic adolescents. The group discussed the possibility of starting a group home for disturbed children and adolescents, but realized that Cass County did not have a large enough population to support a home. At this point, the Director of Social Services at DHS, Mark Mullen, pointed out that there was some funding available through CASSP. Carol Garvis decided to write the grant in early 1987 and the funds were awarded that fall.

The first action the group took was to hire a coordinator for CASSP. Sara Nelson was interviewed by the entire original group of human service professionals and hired in October, 1987. The project was housed at AEA and Carol Garvis remained actively involved with CASSP until she moved from the county in June, 1988. The first official CASSP meeting was held the second Thursday of January, 1988; attending were all members of the original group as well as others from the community who were concerned about the county's population of seriously emotionally disturbed children and adolescents.

The CASSP Committee's first year's agenda was laid out in the grant. First, they compiled a directory of youth services that lists the agencies within the county that serve the SED and at-risk population, the services they provide, and how to obtain those services. This youth resource directory was distributed to all agencies within the county to use as a source of information when making referrals for SED clients.

Second, they conducted three needs assessments. One was of service providers to determine what services were lacking and areas of continuing education that would be helpful. A survey of parents of SED children receiving services looked at service accessibility and quality. A third survey was given to ten percent of students in grades 7 through 12 in the county. This survey was also to measure the accessibility and quality of services. Both students and parents indicated a high stigma associated with utilizing services and a fear of "being found out."

Third, they sponsored a Peer Helper Facilitator Training Workshop. This two-day, overnight workshop taught the peer helper skills to 15 people who could then train others in their own communities.

The CASSP group did not use all of the grant money during the first nine months, partly because of a late start getting the coordinator hired and partly because they received a lot of printing and service discounts from the AEA. This enabled the group to extend the program through September 1988.

During the extension, the group developed and printed "Helping Services" cards. These wallet-size cards included crisis and information numbers for both local and nationwide services. They were distributed to all students in grades kindergarten through 12 in the county. The cards were intended as a resource guide for peer helping (particularly among those in grades 7 through 12). CASSP members found that children often seek help from peers rather than parents.

The group also sponsored a workshop during the extension. "Beyond Child Abuse: Impact, Intervention, Immediacy" met the requirements for mandatory reporters but emphasized what can be done about child abuse, personally and professionally.

Activity continued beyond the end of the grant. Meetings of the CASSP group continued monthly. Since October 1988, funds for CASSP have come from AEA, Board of Supervisors, Department of Human Services, US West, Fact Foundation, Anita City Council, and local service organizations such as Rotary and Lion Clubs. These funds were used to continue the coordinator's salary and various CASSP activities. AEA continued to house the coordinator and to provide office supplies, office support, and accounting services.

During the 1988-89 school year, CASSP co-sponsored Family Fun Day, a festival of low-cost family activities. This has become an annual project for CASSP. A teen lock-in was held in March 1989. Students in grades 7-8 and 9-12 each had an overnight lock-in. There were workshops on a variety of teen issues, followed by a dance, games, pizza, etc.

During the 1989-90 school year, CASSP continued its monthly meetings and other activities. A survey of ten percent of the 5th through 8th graders was conducted to determine what types of activities students would enjoy.

Career Fair was held for the first time in spring 1990. Seventy businesses set up displays for students to tour. Juniors were able to sign up to shadow a person in a career of their choice. Shadowing day began with an employer/student breakfast, followed by a morning of shadowing. Students attended afternoon workshops dealing with resumes, job expectations, and interview skills.

CASSP sponsored a Volunteer Ideas Party (VIP). VIP was a workshop for adult volunteers working with youth in group activities such as 4-H, Scouts, churches, and other youth groups.

CASSP was also working to establish Safe Homes networks throughout the county. Participating parents were to sign a three-part pledge to be in the Safe Homes Directory. The pledges indicate that parents will not allow (1) parties when they are not at home, (2) alcohol to be consumed by minors, or (3) illegal drugs on the property. Parents can use this Directory as a resource for making more informed decisions concerning their children and also as a resource for support among themselves.

In addition to these direct service activities, the CASSP project in Cass County is believed to have stimulated the development of other direct services. Three that were mentioned frequently during interviews were: (1) Lutheran Social Services created an intensive in-home family therapy project for SED kids and their families; (2) DHS created more extensive protective services for the SED population; and (3) there was more emphasis on the School District's Alternative School so that adolescents who drop out have a second chance to finish high school.

There is also a consensus that the amount of interagency coordination has increased as an outcome of the CASSP project. Agency personnel point to three interorganizational structures that have developed since 1987: (1) an Inter-Agency Committee that meets once a month to discuss the coordination of services to SED children; (2) a Planning Board created to act as a catalyst for change in the delivery of services to the SED population; and (3) a Multi-Disciplinary Child Abuse Team which serves as a structure for coordination of services to abused and neglected children. Without exception, agency directors and staff agreed that agencies that never communicated before CASSP have now developed solid working relationships.

The future of CASSP in Cass County was uncertain. Leaders in the County said that funding was becoming more difficult to find after two years of fund-raising. They believed, however, it was crucial that there be a coordinator for CASSP, and this costs money. During the interviews it became evident that although people were taking time to attend team meetings, no one was willing or able to take the extra time to facilitate them, and all participants were grateful that Sara Nelson was available. It is likely that, without funding, team meetings will cease, further development of the system will not occur, and past accomplishments may deteriorate. The inter-agency relationships developed through CASSP may not dissolve, but without a coordinator, coordination will decline.

Characteristics of the Cass County System

The interagency service system for SED children in Cass County is described below in some detail and is summarized by the profile shown in Table 3.1.

Table 3.1 Profile of the Cass County Service Delivery System

Total Number of Children [1]		5,059
Ages 0 to 9	2,393	
10 to 19	2,666	
Children Needing Mental Health Services [2]		597
Seriously Emotionally Disturbed (SED) Children [2]		298
Children Placed Outside County Who Should be Served In County[3]		2
Number of Agencies		6
Number of SED Programs[4]		16
Average Size of Caseload Per Program		
Monthly Minimum		2
Monthly Maximum		45
Monthly Average		15
Average Number of Referrals Per Agency		
Monthly Minimum		5
Monthly Maximum		36
Monthly Average		16

[1] Source: 1980 U.S. Population Census.

[2] The commonly accepted estimate of the need for mental health services among children is approximately 11.8%; about half fall into the most serious category (Gilmore, Chang, & Coron, 1984).

[3] Point-in-Time DHS/JCS Study (5-18-90).

[4] A program is a discrete service offered by the staff of an organization.

Given the most recent census information, it can be estimated that there are 597 children ages 0 to 19 needing some type of mental health care in Cass County, while 298 can be considered to be seriously emotionally disturbed.

Comprehensiveness and Accessibility of Services. Six organizations that provide direct services to SED children and youth were included in the study:

1. Southwest Iowa Mental Health Center
2. Cass County Memorial Hospital
3. Iowa Department of Human Services
4. Loess Hills Area Education Agency 13
5. Lutheran Social Services
6. Alcohol and Drug Assistance Agency

These organizations, services, and caseloads are shown in Table 3.2.

Table 3.2 Core and Support Mental Health Services in Cass County

CASSP Core Mental Health Services	Provider Agency	Monthly Average Caseload
Education and Prevention	CASSP Committee	
Nonresidential Treatment		
• Diagnostic Services	Southwest Mental Health Center	2
• Outpatient Treatment	Southwest Mental Health Center	10
• Day Treatment	NA	—
• Crisis Intervention	Southwest Mental Health Center	5
• Home-Based Treatment	Department of Human Services	45
	Lutheran Social Services	5
	Loess Hills AEA	5
Residential		
• Therapeutic Group Homes	NA	—
• Therapeutic Foster Care	Lutheran Social Services	8
• Residential Treatment	NA	—
• Inpatient Hospitalization	Cass County Memorial Hospital	3
• Case Management	Department of Human Services	45
SUB TOTAL		128

Essential Support Services	Provider Agency	Monthly Average Caseload
Social Services		
Child Protection Assessment	Department of Human Services	35
Counseling	Lutheran Social Services	6
Regular Foster Care	Department of Human Services	15
Educational Services		
Assessment	Loess Hills AEA	2
Counseling	Loess Hills AEA	15
Chemical Dependency Treatment		
Outpatient	Alcohol & Drug Abuse Assistance	25
Inpatient	NA	—
GRAND TOTAL		226

• Core Services NA = Not Available

The six organizations identified for this study provide a total of 16 direct service programs to residents of Cass County. The size of these organizations' programs varied considerably, from a program with a monthly average caseload of 2 (assessment services at Southwest Mental Health Center and Loess Hills Area Education Agency) to a monthly caseload of 45 at the Iowa Department of Human Services. The average caseload for all 14 programs was 15.

Rural counties, of course, have a considerably narrower range of services than do urban counties. Nevertheless, we expect the 10 core mental health services for children and youth to be available at the local level. Cass County is fortunate to have 7 of the 10 core services. The three core services not available in Cass County are day treatment, therapeutic group homes, and residential treatment. These service gaps are shown in Table 3.2.

The size of caseloads is an indicator of the degree to which services are accessible to those that need them. If, for example, we have an estimate of the potential client population and measures of the actual client population, then the difference is a rough measure of accessibility. If we sum caseload size for each SED program in Cass County the total is 226, or 76% of the estimated number of seriously emotionally disturbed children in Cass County (Table 3.1). [Since the total caseload of 226 is a duplicated count, and since we know that SED children are multi-problem and most probably receive more than one service, 76% is most probably an inflated indicator for accessibility.] Nevertheless, based on this data Cass County appears to have a fairly comprehensive and accessible mental health system for children and adolescents.

The Structure of the System. The six organizations that make up the SED service system in Cass County reported an average of 93 referrals within the system every month. [These referrals are duplicative; we do not know from this data how many individual children, on the average, receive a service referral.] We do know, however, that these referrals mean that the system is fairly tightly linked. Table 3.3 is a matrix of client referrals and illustrates the degree to which the Cass County System is linked by referral activity.

Table 3.3 Cass County Client Referral Matrix
(average number of referrals per month)

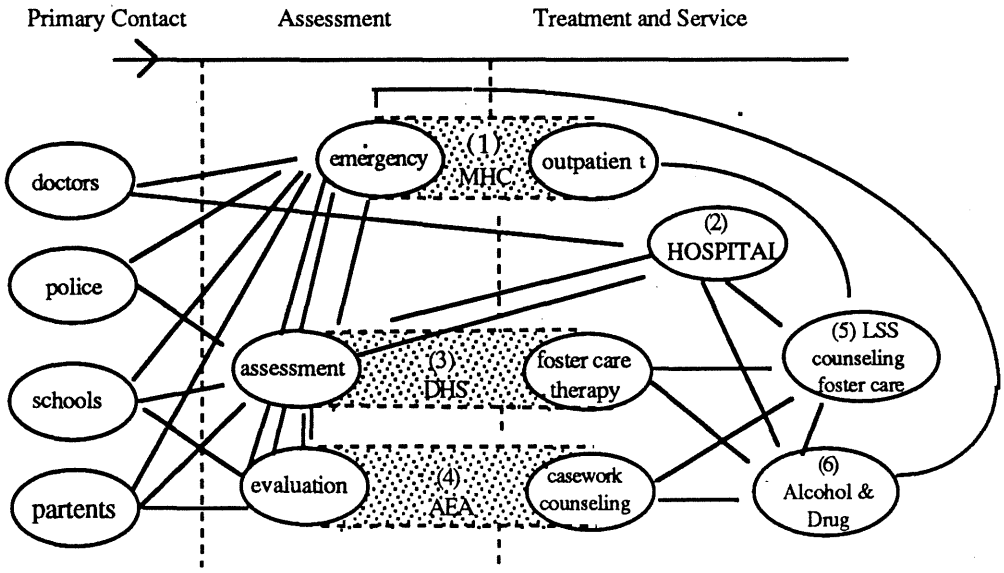
Senders ---------->	Receivers | 1	2	3	4	5	6	Total
(1) Southwest Mental Health Center	--		1	2	1	1	5
(2) Cass County Memorial Hospital	5	--	4	4	3	8	24
(3) Department of Human Services	4	12	--	2	8	10	36
(4) Loess Hills Area Education Agency	1		7	--	1	1	10
(5) Lutheran Social Services	2		1		--	3	6
(6) Alcohol & Drug Abuse			10		2	--	12
Total	12	12	23	8	15	23	93

* Referral channels carrying less than one referral per month were excluded from the matrix.

In a system of organizations that is serving the same client population, it is often necessary, because clients have multiple problems, to refer clients to other organizations for services. There are, then, potentially two linkages between each pair of agencies: one going one direction and one going the other direction. Each cell in the matrix in Table 3.3 represents a "channel" by which a client is referred from one organization to another. In Cass County, with six organizations in the service system, it is possible to have 30 channels that can be used as client referral channels. The referral data collected in Cass County indicate there are 23 one-way referral channels in use and, therefore, 77% of the potential channels are being used.

Combining this information concerning the number of agencies, their services and referral patterns produces Figure 3.1 showing the structure of the Cass System in graphic form. This diagraph is a model of the real world, simplified to make it easily understood, but representative of the structure of the Cass County service delivery system.

Figure 3.1 Cass County SED Service Delivery System



On the basis of the Referral Matrix and the Diagraph, it appears that there are three clusters of organizations serving SED children in Cass County.

Cluster #1: Organizations that serve as early identification and prevention for the system—primarily the schools but also parents and occasionally the police.

Cluster #2: Medical and mental health organization—the Mental Health Center and the Hospital.

Cluster #2: DHS, AEA, Lutheran Social Services, and the Alcohol and Drug Abuse Assistance Agency. This group provides assessment and evaluation as well as treatment services (which are largely social services), and non-medical, counseling and behavioral services.

Centrality is an important structural dimension of interagency systems, because it is related to the ease with which people can communicate with each other and cooordinate their work. The more a system has a dominant central core agency, the more likely it is that the system will run smoothly.

In Cass County, the centrality score based on interactions between organizations is .033, which represents a very decentralized structure. The service system in Cass County is so small that almost every organization relates to all other organizations directly (i.e., intermediaries are not used) in serving children and youth with mental health problems.

Orientation to Clients

In addition to the size and structure of an interagency system, the orientation of workers to their clients has an important influence on the way that the system functions. Below we look at the scope of service, meaning the breadth of both assessment and service delivery.

Scope of Assessment. As knowledge has grown, our perceptions of human behavior have become more complex. The increase in knowledge has also meant that many more clients are diagnosed as having multiple problems and needing multiple services. This phenomenon is also producing more variation in the way that different human services assess children and prepare service plans. Some professionals use many categories when doing an assessment, while others take a narrow view of their clients.

In this study we were interested in determining how broadly workers in Iowa's SED service systems viewed their clients. We therefore listed the four major categories of internal biological functioning (communication, intelligence, physiology, and emotions) and two categories of external functioning (social and the concrete environment). We asked workers in Cass County (N=13) to estimate the percentage of their SED clients that exhibited problems in each of these six categories. The results are shown in Table 3.4.

As is to be expected in mental health service delivery systems, the problems exhibited by the most clients as perceived by their workers were emotional dysfunction (74%) followed by social dysfunction (51%), environmental deficits (51%), communication dysfunction (45%), intellectual impairment (38%), and physiological impairment (16%).

As a means of summarizing these data, we computed a Scope of Assessment Index. A worker who viewed every single one of his/her clients as having problems falling into all six categories would have the broadest possible orientation and would be assigned a score of 1.0, while the worker who assessed her/his clients as exhibiting only one type of problem would be assigned a score of .16. In Cass County, the average scope of assessment score was .47, and the standard deviation was .22 (meaning that 66% of the scores ranged from .25 to .69). In general terms these scores indicate that the Cass County SED system takes a moderately broad orientation to its clients.

Table 3.4 Perceptions of Staff Members in Cass County Regarding Percent of their SED Clients that Exhibit Problems in Each of Six Assessment Categories (N=13)

Problem	Mean	SD
Communication Dysfunction	.45	.37
Intellectual Impairment	.38	.34
Emotional Dysfunction	.74	.33
Physiological Impairment	.16	.41
Environmental Deficit	.51	.31
Social Dysfunction	.51	.41
Scope of Assessment Index [a]	.47	.22

[a] The Scope of Assessment Index is a summative score which represents the level of coordination effort. The Index can range from 0 to 1.0 and represents the respondent's breadth of assessment. It is computed for each respondent by adding the scores for each respondent assigned to each of the six diagnostic categories and dividing by six. The overall Index is the average of the respondents' scores.

Scope of Service Another way to describe a system's orientation to clients is to ask: how comprehensive is the service plan for each client; to what degree are clients receiving multiple services? Description of a comprehensive mental health system for children and adolescents contains many services deemed essential. The framework used for this study contains seven categories of services (mental health, social, educational, health, vocational, recreational, and operational). Within each category there are multiple services with a total of 31 services.

Workers in Cass County were asked for their perceptions regarding the percentage of the SED clients that received each of these 31 services. The results are shown in Table 3.5, which shows that the service utilized by SED children most frequently was outpatient treatment, with 65% of the children receiving this service, followed by health screening (56%), educational assessment (50%), financial assistance (44%), case management (44%), foster care (31%), and transportation (30%). These were the only services that were thought to be utilized by at least one-third of the SED children.

As a means of summarizing these data, we computed an index for scope of service. The questionnaire of a worker who viewed every single one of his/her clients as receiving all 31 services would indicate that the system has the broadest possible orientation, and it would be assigned a score of 1.0; the questionnaire of a worker who viewed his/her clients as receiving only one service would be assigned a score of .03. In Cass County, the lowest scope of service score was .07, the highest was .88, the average was .51, and the standard deviation was .61 (meaning that 66% of the scores ranged from .20 to .82). In general terms these scores indicate that SED children in Cass County are viewed by the staff members as having moderately broad service plans.

Table 3.5 Perceptions of Staff Members in Cass County Concerning the Percent of their SED Clients that Receive Each of 31 Services (N=13)

		Mean	S.D.
Mental Health Services	Outpatient Treatment	.65	.24
	Home-Based Services	.20	.27
	Day Treatment	.17	.37
	Therapeutic Foster Care	.13	.28
	Therapeutic Group Care	.10	.21
	Inpatient Hospitalization	.40	.43
Social Services	Protective Services	.19	.31
	Financial Assistance	.44	.33
	Respite Care	.02	.04
	Shelter Services	.11	.27
	Foster Care	.31	.42
	Adoption	.09	.27
Educational Services	Assessment & Planning	.50	.47
	Resource Rooms	.18	..28
	Self-Contained Special Ed.	.21	.36
	Home-Bound Instruction	.06	.14
	Residential Schools	.26	.38
	Alternative Programs	.07	.10
Health Services	Screening & Assessment	.56	.28
	Primary Care	.09	.28
	Acute Care	.27	.43
	Long-Term Care	.06	.14
Vocational Services	Vocational Assessment	.18	.37
	Vocational Skills Training	.19	.37
	Work Experiences	.12	.18
	Shelter Employment	.03	.06
Recreational Services	After School Programs	.05	.14
	Summer Camps	.05	.14
Operational Services	Case Management	.44	.50
	Transportation	.30	.45
	Advocacy	.18	.38
Scope of Service Index [a]		.51	.61

a The Scope of Service Index is a summative score that represents the degree to which clients receive multiple services. It can range from 0 to 1.0 and represents the respondent's perceptions of service implementation. It is computed for each respondent by adding the scores assigned to each of the 31 service categories and dividing by 31. The overall Index is the average of the respondents' scores.

Case Coordination and Administrative Coordination

One of the most important aspects of interagency service delivery systems, one that attracts the most attention, is coordination. Although this term is used with great frequency, there is not always agreement about its meaning. As used in this study, interagency coordination refers to methods that internally regulate a system. When interorganizational coordination exists, many aspects of the work activity are so governed that the effort of each individual organization is directed toward common objectives and goals. When coordination does not exist, organizations have few restrictions and are free to choose their own objectives and methods, which may be consistent with or conflict with those of other organizations.

Case Coordination. Staff must often work closely with staff in other agencies. The need for case coordination is profoundly affected by the way that clients flow through a system. There are three basic client flow patterns. In the Sequential Method, organizations make referrals to and accept referrals from other agencies in the system (clients flow from one organization to another but are served by only one at a time). In the Reciprocal Method, organizations make and accept referrals from more than one organization in the system (clients are served simultaneously by more than one agency). In the Team Method, organizations share the work of serving or treating clients (clients are served by agencies whose treatment staff have developed together one treatment plan and who constitute one intervention team).

If the pattern is sequential—as in a system where adolescents are referred from home to hospital, to group facility, and home again—there is little necessity for case coordination across organizational boundaries, because patients are treated by one organization at a time. At the other extreme is the team pattern, as in a system that serves multi-problem families, where is there a compelling necessity for case coordination because the child has to be treated simultaneously by workers from numerous agencies.

We asked workers (N=13) in Cass County what percentage of their SED clients progressed through their system in each of these three patterns. Their responses are shown on Table 3.6, which shows that by far the most frequently used client flow pattern is the reciprocal: 54% of the time SED clients are served simultaneously by two or more agencies whose staff are interacting but not as a team. The second most used client flow is the team pattern (32%) followed by the sequential pattern (14%).

As a way of summarizing these data, we computed a Total Case Coordination Score. Based on the theory described above—that simultaneous services from multiple organizations require high levels of case coordination—we weighted the scores for each type of coordination method so that team methods received the most weight followed by reciprocal methods and then sequential methods. This means of assessing the amount of case coordination within the Cass system produced a score of 1.90 with a standard deviation of .45. As we see when we compare this score with the other two counties in this study, Cass County exhibited a very high level of case coordination.

Table 3.6 Perceptions of Staff Members in Cass County Regarding Percentage of their SED Clients that Flow Through the Cass County Service Delivery System in a Sequential, Reciprocal, or Team Pattern (N=13)

Case Coordination Pattern	Mean	SD
Sequential	.14	.19
Reciprocal	.54	.26
Team	.32	.27
Total Case Coordination Score[a]	1.90	.45

[a] Total Case Coordination Score is a summative weighted score that represents the total case coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by adding the percentages assigned for each of the three patterns that have been weighted according to the amount of feedback they provide: (Sequential * 1) + (Reciprocal * 1.5) + (Team * 3.0). The overall score is the average of the respondents' weighted scores.

Administrative Coordination. Staff members are not the only persons in service delivery who are asked to mesh their work with persons in other agencies. Administrators will coordinate their services with others if they perceive a need for compatibility between programs. For example, if my agency provides service X, and if, in order for my service to be effective, my client must also be receiving service Y (which is provided another agency), then I will work to insure that my client can get service Y and that it is compatible (offered when, where, and how my client needs it). This means that as an administrator I will monitor various incompatibilities that occur when programs reside in different organizations with different perspectives about how clients should be treated. I will seek to feed back into the system information about incompatibilities when they occur, and I will do this by sharing information and making decisions with administrators of other agencies in the system. As interagency systems move toward an increasing emphasis on effective services to multi-problem clients, the greater is the need for information feedback via group planning and decision making structures as opposed to impersonal rules and plans.

Methods of administrative coordination can be thought of, therefore, as varying with regard to the amount of information feedback required to implement them . Three methods, which utilize increasing amounts of feedback, were used as indicators of the amount of coordination. Administrative coordination by Impersonal Programming includes the utilization of plans, rules, regulations, agreements, contracts, or anything which removes discretion from individual workers and requires little information feedback. Administrative coordination by Personal Feedback includes the use of person-to-person contact between workers, or the designation of an individual to act as coordinator in order to expedite planning and decision-making across organizational boundaries. Administrative coordination by Group Methods means feedback which is obtained through face-to-face communication by two or more individuals planning and making decision by consensus.

Going from impersonal, to personal, to group methods means we are achieving higher levels of coordination. In fact, the weights we assign to the coordination and integration scores are based on the assumption that group methods achieve three times more coordination than do impersonal methods.

Table 3.7 shows how six administrators of SED programs in Cass County perceive the use of impersonal, personal, and group methods of coordination among the agencies in their system. The table shows that impersonal methods are thought to be the dominant method by which administrators coordinate their programs. In fact, almost half (46%) of the time impersonal methods are used. Personal methods (28%) and group methods (26%) are used about equally.

Table 3.7 Perceptions of Administrators in Cass County Regarding Percent of Time Impersonal, Personal, and Groups Methods of Coordination are Used (N=6)

Methods of Administrtive Coordination	Mean	SD
Impersonal Methods (legally binding laws, rules; written interagency agreements; unwritten agency agreements)	.46	.23
Personal Methods (administrators or staff acting as coordinator; informal communication)	.28	.22
Group Methods (standing committees; ad hoc committees)	.26	.20
Total Administrative Coordination Score [a]	1.66	.36

[a] Total Administrative Coordination Score is a summative weighted score that represents total administrative coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by adding the percentages assigned to the three methods of coordination which have been weighted according to the amount of feedback they provide: (Impersonal * 1) + (Personal * 1.5) + (Group * 3.0). The overall index is the average of the respondents' weighted scores.

As a way of summarizing these data, we computed a Total Administrative Coordination Score. Based on the theory described above—that increasing amounts of feedback produce increasing amounts of coordination—we weighted the scores for each type of coordination method so that group methods received the most weight followed by personal methods and then impersonal methods. This means of assessing the amount of coordination within the Cass system produced a score of 1.66 with a standard deviation of .36. As we see when we compare this score with the other two counties in this study, Cass County exhibited a very high level of coordination.

Evaluation of the Cass County System

Today many believe that family and child services should be accessible, available, high in quality, well coordinated, integrated, and standardized in terms of eligibility requirements and operating procedures. They should also have the capacity to continue to improve. In addition, children and adolescents with mental health problems should be identified early, and services should be family-centered and community-based, should be individualized and provide for the least restrictive treatment, and should encourage family participation and the child's smooth transition to adulthood.

We asked both administrators and staff how they would measure their system against these standards. Because we were interested in trying to assess the impact of the CASSP grants in moving the system toward these goals, we asked respondents the degree to which these characteristics exist today and the degree to which they existed three years ago, and then we calculated the difference. The range of differences was broken down into descriptive categories.

Staff Responses. Staff responses are shown in Table 3.8. The most frequent responses were Little Improvement (37%) and Some Improvement (29%).

Administrative Responses. The results from administrative respondents (N=6) are shown in Table 3.9. Administrators in Cass County reported that they felt there was some improvement in the coordination of services, in the provision of least restrictive services, and in the opportunity for family participation. Overall, the most frequently given response of administrators was Little Improvement (35%), followed by Some Improvement (30%).

Table 3.8 Perceptions of Staff Members in Cass County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=13)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	0 %	9 %	64 %	18 %
Available	0	0	8	50	33
High in Quality	0	0	50	33	17
Well Coordinated	0	8	50	25	8
Integrated	0	0	42	33	8
Standardized	0	0	42	42	8
Capable of Further Improvement	8	8	50	33	8
In regard to the following core values and principles:					
Early Identification	0	0	33	42	25
Family-Centered	0	0	33	42	25
Community-Based	0	8	33	50	8
Individualized Service	0	0	42	25	25
Least Restrictive	0	0	42	25	25
Family Participation	0	0	50	33	17
Smooth Transition to Adulthood	0	50	25	25	0
Percent of Responses in Each Category	0 %	4 %	37 %	29 %	12 %

Note: Percentages may not sum to 100, due to rounding.

Table 3.9 Perceptions of Administrators in Cass County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=6)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	0 %	17 %	67 %	17 %
Available	0	17	0	67	17
High in Quality	0	0	50	33	17
Well Coordinated	0	0	33	33	33
Integrated	0	0	17	67	17
Standardized	0	0	67	33	0
Capable of Further Improvement	0	33	33	33	0
In regard to the following core values and principles:					
Early Identification	0	17	33	33	0
Family-Centered	0	17	33	33	17
Community-Based	0	0	50	33	17
Individualized Service	0	0	50	33	17
Least Restrictive	0	17	33	17	33
Family Participation	0	0	67	0	33
Smooth Transition to Adulthood	0	0	17	67	17
Percent of Responses in Each Category	0 %	6 %	35 %	30 %	14 %

Note: Percentages may not sum to 100, due to rounding.

Conclusions

This case study gives us a considerable amount of information about the Cass County SED service delivery system. It has described its range of services, its structure, and provided some data about its orientation and performance.

For a county of its size, Cass County has a fairly broad child mental health service system. There are 7 out of 10 core services available in the County, although the caseload capacity is quite small. There are, however, serious gaps that create difficult problems for providers and families. They are:

1. Day Treatment
2. Therapeutic Group Homes
3. Residential Treatment

It is unlikely that Cass County has the population base to support residential treatment, but day treatment and a group home are programs that are badly needed and should be developed.

This conclusion was underscored in our interviews with many agency directors and staff. They told us repeatedly that there is a severe shortage of therapeutic family and group foster care.. As a result some children are unnecessarily placed in in-patient facilities out-of-county. Cass County does not have a child/adolescent psychiatrist nor does it have a day treatment program for young children. We were told again and again that families have to go to either Council Bluffs or Des Moines for many services, and since many cannot afford the cost of transportation their children do not get needed treatment.

The other major area of concern was services for adolescents. One perceived problem was the lack of consistency in judicial decision making because of the system of rotating judges. The other major gap that was cited over and over was the lack of a shelter for runaways and a half-way house for adolescents returning from out-of-county drug treatment. This is a gap that should be filled if at all possible.

The matrix of referrals tells us that the Cass County service system is fairly well linked, and the information on administrative coordination and case coordination tells us it functions systemically. The participating organizations use each other. Staff and administrators alike are aware of the other organizations in their system, they invest considerable amount of effort in terms of administrative and case coordination and, therefore, the system is perceived by all involved as functioning fairly smoothly.

In regard to the CASSP grant, there was a strong consensus that it was a good idea that had had important effects on the community. There was a strong consensus that the high level of coordination in this system had been improved because of the grant. The only criticism heard was that the grant provided too little funding for too short a time period. Its accomplishments were worthwhile, it improved the service system—especially the level of coordination—and the program should be extended.

IV. Case Study of SED Service System in Delaware County

Delaware County
SED Service System

Delaware is a rural county with a total population of almost 19,000 located in northeast Iowa contiguous with Dubuque County, its nearest urban area. It has one population center, Manchester, which is the county seat. With its small population, Delaware has a small number of human service organizations serving seriously disturbed children and adolescents.

Activities and Accomplishments of the CASSP Grant

This is a study of mental health services and treatment programs for children that reside in Delaware County, Iowa. It incorporates information about child mental health services and the system of care in this county. It is not meant to be an exhaustive study, but is a profile and sketch of the subject. It should be remembered that this is cross sectional data collected in the spring of 1990 and, as such, is a snapshot of only one point in time. Interorganizational systems are organic and ever changing.

The history of the Delaware County CASSP Grant began in 1987 when a male student at West Delaware High School committed suicide. This was a very traumatic event for which high school personnel say they were unprepared. The high school principal, vice principal, and a minister met quickly and planned an emergency response, but they were unable to gain control of the situation and the young victim's girl friend committed suicide six weeks later. Alarmed because their efforts to prevent a second event had failed, school officials and community representatives decided they had to create an on-going effort.

Three immediate steps were taken in February, 1987. The West Delaware School District held a conference out of which came the "Traumatic Event Response Plan". Second, they sponsored a full day in-service program on suicide. Third, they hired Mary Funky, a Psychiatric Project Consultant for Lutheran Social Services in Cedar Rapids, to write a grant proposal for the DHS CASSP initiative. The proposal was funded in March, 1987.

Mary Funky became the Project Coordinator and she worked closely with Cindy Reed, a psychiatric nurse at St. Lukes Hospital in Cedar Rapids. They facilitated a task group that formed to implement the objectives outlined in the grant. The group consisted of persons from the Area Education Agency, schools (West Delaware High, Maquoketa Valley, Edgewood, and Coolberg), Substance Abuse Services Center, Correctional Services, Department of Human Services, and the Delaware County Ministerial Association. They named themselves the Delaware County Adolescent at Risk Committee, adopted the prevention of mental illness as their goal, and decided that information about suicide targeted at general audiences was to be their prime activity. The Committee sponsored a community-wide seminar in the spring, which was judged to be a big success with several hundred community people attending.

During 1987-88 the At Risk Committee continued their work, and although the grant funds ran out they have continued to hold two major conferences each year. In addition to suicide, the conferences have focused on adolescent sexuality. The first of this series was on sexual abuse and drew about 90 participants; the second was entitled "Love, Sex, and Infatuation" and drew 200 people from across the county. The Committee has now decided that future topics will include drug abuse and self-esteem, and they will take up the problem of satanism and cults.

Members of the At Risk Committee interviewed for this study were unanimous in their belief that the grant had had an important impact on the community. They pointed to a number of ways their efforts had stimulated the development of badly needed services. For example, the school district has expanded its school breakfast program so that it is available to a larger number of adolescents. In addition, several agencies have cooperated in the development of a Big Brother and Big Sister program, a prevention service they feel will have a very large impact on problem teens.

Committee members were aware, however, that the county has a dearth of treatment programs because there is not a mental health center in the county nor are there any private practitioners (Delaware is served by Northeast Mental Health Center in Dubuque which is 60 miles east of Manchester and by Psychology Associates 50 miles west at Independence). As a result, the Committee is looking for ways to develop a day treatment program at Memorial Hospital. Whether this is possible depends on whether funds and personnel can be found.

The Delaware County Adolescent at Risk Committee remains active as a visible focus for parents and adolescents. The committee has continued to meet monthly to share ideas and concerns for the county's SED adolescent population. With local fund raising and donations, they have been able to carry on their educational and informational activities. Persons interviewed all felt strongly that the CASSP Grant had been successful in raising awareness throughout the county and in disseminating knowledge about mental health issues and programs. As a result of the Grant, agencies and church personnel are far better able to identify individual SED clinets, and their expectations are far greater in terms of what services are needed in their community. There was a good deal of frustration expressed about the lack of badly needed supportive and treatment services. It is ironic that the successes of CASSP have bred a general feeling of stress and frustration.

The scarcity of resources within Delaware County forces patients to go outside the county for basic services. and forces agencies outside the county (which are already stretched for funds) to try to provide some services within the county. For example, the only private family service agency providing service in Manchester is Families of Northeast Iowa, which provides one social worker one day per week. When this study was conducted, the Mental Health Center of Northeast Iowa had one staff person in the county for 1 1/2 days per week. The problem of accessibility is, therefore, a major one for residents of Delaware County, and it is compounded because many in need of service cannot afford the cost of travel to Dubuque, Independence, or Cedar Rapids.

The future of CASSP in Delaware County is uncertain. Funding is becoming scarce after two years of fund raising, and volunteers are beginning to burn out. There is a consensus among those interviewed that because there are so few services in the county, a service system does not exist unless a family is DHS eligible because of abuse and neglect. In those cases there is a bare minimum of treatment available.

The interagency service system for SED children in Delaware County is described below in some detail and is summarized by the profile shown in Table 4.1.

Table 4.1. Profile of the Delaware County Service Delivery System

Total Number of Children [1]		7,178
Ages 0 to 9	3,250	
10 to 19	3,928	
Children needing Mental Health Services [2]		847
Seriously Emotionally Disturbed (SED) Children [2]		424
Children Placed Outside County Who Should Be Served In County[3]		5
Number of Agencies		8
Number of SED Programs[4]		19
Average Size of Caseload Per Program		
Monthly Minimum		2
Monthly Maximum		44
Monthly Average		11
Average Number of Referrals Per Agency		
Monthly Minimum		<1
Monthly Maximum		25
Monthly Average		8

[1] Source: 1980 U.S. Population Census.

[2] The commonly accepted estimate of the need for mental health services among children is approximately 11.8%; about half fall into the most serious category (Gilmore, Chang, & Coron, 1984).

[3] Point-in-Time DHS/JCS Study (5-18-90).

[4] A program is a discrete service offered by the staff of an organization.

Based on 1980 data from the Census Bureau, it is estimated that there are 847 children and adolescents needing mental health services, of which 424 can be classified as being seriously emotionally disturbed.

Comprehensiveness and Accessibility of Services. Data were collected from 8 organizations that provide mental health services to children in Delaware County, of which only 5 are located in the county. Because there are core services provided to residents of Delaware County by three organizations located outside the county, we included them in the survey.

In Delaware County	Outside Delaware County
1. Iowa Department of Human Services	
	2. Northeast Mental Health Center (Dubuque)
3. Juvenile Court Services	
4. Memorial Hospital	
	5. Cromwell Children's Unit (Independence)
6. Area Education Agency	
	7. Psychological Associates (Independence)
8. Substance Abuse Center	

We included the three organizations outside of Delaware County because they function as part of the Delaware system; without them Delaware has no system. These organizations identified as the service system for Delaware residents provide a total of 19 discrete programs in the county. The size of the organization's programs was generally small, with only DHS carrying more than 12 cases per month. A list of the agencies and their services is shown in Table 4.2.

Of the ten core services, only four are available in the county. Missing are diagnostic services, day treatment, therapeutic group homes, therapeutic foster care, residential treatment, and inpatient hospitalization. Of the core services that are available, the only source of outpatient treatment is the hospital and it carries only very small caseloads (approximately 12 per month). For services not available in Delaware County, children and youth must go to Independence or Dubuque.

Table 4.2 shows that caseloads generally are very small in Delaware County. If we sum caseload size for each SED program in Delaware County the total is 164; this means that only 39% of the total number of seriously emotionally disturbed children in the county are receiving some kind of service. [Since the total caseload of 164 is most probably a duplicated count, and since we know that SED children are often multi-problem and thus receiving 2 or more services, 39% is most probably an inflated estimate.] Overall, it appears that the availability of services, and caseload size for services that are available, is very low in Delaware County

The Structure of the System. The eight organizations that make up the SED service system in Delaware County reported an average of 67.5 referrals within the system each month. [These referral are duplicative, we do not know from this data how many individual children, on the average, received a service referral.] Table 4.3 illustrates the volume and direction of referrals in the Delaware County System.

Table 4.3 Delaware County Client Referral Matrix (average referrals per month) *

Senders ——————> Receivers |

	1	2	3	4	5	6	7	8	Total
1 Department of Human Services		5.00	2.00	.50	1.50		4.00	12.00	25.00
2 Northeast Mental Health Center	1.00					2.00		4.00	7.00
3 Juvenile Court Services	1.00	1.00					1.00	1.00	4.00
4 Memorial Hospital	2.00	.50					4.00		6.50
5 Cromwell Children's Unit	.25	.25						6.00	6.50
6 Area Education Agency	2.00	.25	.50		.25		5.00		8.00
7 Psychology Associates						.25			.25
8 Substance Abuse Center	10.00					.25			10.25
Total	16.25	7	2.5	0.5	1.75	2.5	14	23	67.5

* Because referral volume was very small, fractions of average referrals have been included in this matrix

In a system of organizations that is serving the same client population, it is often necessary, because clients have multiple problems, to refer clients to other organizations for services. There are, then, potentially two linkages between each pair of agencies: one going one direction and one going the other direction. Each cell in the matrix represents a "channel" by which a client is referred from one organization to another. In Delaware County, with eight organizations in the service system, it is possible to have 56 channels that can be used as client referral channels. The referral data collected in Delaware County indicate that there are 27 one way referrals channels in use, or 48% of the potential channels being used.

Putting the information concerning the number of agencies and their services together with the referral data produces Figure 4.1 that shows the structure of the Delaware System in graphic form. This diagraph is a model of the real world, simplified to make it easily understood, but representative of the actual flow of SED clients through the agencies in Delaware County.

The graphic in Figure 4.1 illustrates how children and adolescents flow through the Delaware system. There are four points of early identification and prevention: Parents, schools, police, and physicians. These individuals and organizations make referrals to the two core agencies, the Department of Human Services (1) and the Area Education Agency (6). The Mental Health Center in Dubuque (2) and Psychology Associates in Independence (7) function to some degree as core agencies because they are the source of assessment and evaluations (as does Cromwell (5) to a more limited extent for the Court), but they are not located in Manchester. Finally, there are two organizations that function as sources of treatment--the Memorial Hospital (4) and the Substance Abuse Center (8).

Centrality is an important structural dimension of interagency systems, because it is related to the ease with which people can communicate with each other and coordinate their work. The more a system has a dominant central core agency, the more likely it is that the system will run smoothly.

In Delaware County, centrality scores based on interactions between organizations show a relatively decentralized structure (overall centrality .20). The service system in Delaware County is so small that many organizations have direct relations to most other organizations (i.e., intermediaries are not used) for youth mental health services. The Area Education Agency and the Juvenile Court system, followed by Memorial Hospital and the Department of Human Services, are each central to the network.

Orientation to Clients

In addition to the size and structure of an interagency system, the orientation of workers to their clients has an important influence on the way that the system functions. Below we look at the scope of service, meaning the breadth of both assessment and service delivery.

Scope of Assessment. As knowledge has grown, our perceptions of human behavior have become more complex. The increase in knowledge has also meant that many more clients are diagnosed as having multiple problems and needing multiple services. This phenomenon is also producing more variation in the way that different human services assess children and prepare service plans. Some professionals use many categories when doing an assessment, while others take a narrow view of their clients.

In this study we were interested in determining how broadly workers in Iowa's SED service systems viewed their clients. We therefore listed the four major categories of internal biological functioning (communication, intelligence, physiology, and emotions) and two categories of external functioning (social and the concrete environment). We asked workers in Delaware County (N=13) to estimate the percentage of their SED clients that exhibited problems in each of these six categories. The results are shown in Table 4.4.

The results are not what we might expect and are interesting. The workers in Delaware County thought that at least a third of their SED clients exhibit most of these broad categories. The most prevalent problem cited was emotional dysfunction (68%), environmental deficit (59%), social dysfunction (49%), communication dysfunction (39%), intellectural impairment (35%), and physiological impairment (10%).

As a means of summarizing these data, we computed a Scope of Assessment Index. A worker who viewed every single one of his/her clients as having problems falling into all six categories would have the broadest possible orientation and would be assigned a score of 1.0, while the worker who assessed her/his clients as exhibiting only one type of problem would be assigned a score of .16. In Delaware County, the average scope of assessment score was .42, and the standard deviation was .13 (meaning that 66% of the scores ranged from .55 to .81). In general terms these scores indicate that the Delaware County SED system takes a somewhat narrow orientation to its clients in terms of assessment.

Table 4.4 Respondents' Perceptions Regarding Percent of their SED Clients that Exhibit Problems in Each of Six Assessment Categories (N=13)

Problem	Mean	SD
Communication Dysfunction	.39	.44
Intellectual Impairment	.35	.25
Emotional Dysfunction	.68	.13
Environmental Deficit	.59	.15
Physiological Impairment	.10	.23
Social Dysfunction	.49	.12
Scope of Assessment Index [a]	.42	.13

[a] The Scope of Assessment Index is a summative score which represents the level of coordination effort. The Index can range from 0 to 1.0 and represents the respondent's breadth of assessment. It is computed for each respondent by adding the scores for each respondent assigned to each of the six diagnostic categories and dividing by six. The overall Index is the average of the respondents' scores.

Scope of Service. Another way to describe a system's orientation to clients is to ask how comprehensive the service plan is for each client; to what degree are clients receiving multiple services? Description of a comprehensive mental health system for children and adolescents contains many services deemed essential. The framework used for this study was revised from Stroul and Friedman (1987) and contains 7 categories of services (mental health, social, educational, health, vocational, recreational, and operational). Within each category there are multiple services with a total of 31 services.

Workers in Delaware County were asked for their perceptions regarding the percentage of the SED clients that received each of these 31 services. Table 4.5 shows that in Delaware County the services utilized by SED children most frequently were, in rank order, financial assistance (81%), educational assessment and planning (53%), health screening and assessment (50%), outpatient therapy (36%), and transportation (33%). These were the only services that were thought to be received by at least a third of the SED clients. It should be noted that these results are consistent with what we already know about the availability of mental health services in Manchester. Of the eight services that have a fairly high utilization rate, only one (outpatient therapy) is a core CASSP service.

Table 4.5 Respondents' Perceptions Concerning Percent of Their SED clients that Receive Each of 31 Services (N=13)

		Mean	S.D.
Mental Health Services	Outpatient Treatment	.36	.16
	Home-Based Services	.21	.34
	Day Treatment	.06	.18
	Therapeutic Foster Care	.03	.10
	Therapeutic Group Care	.07	.14
	Inpatient Hospitalization	.05	.05
Social Services	Protective Services	.29	.16
	Financial Assistance	.81	.17
	Respite Care	.05	.39
	Shelter Services	.03	.07
	Foster Care	.24	.16
	Adoption	.04	.09
Educational Services	Assessment & Planning	.53	.37
	Resource Rooms	.15	.19
	Self-Contained Special Ed.	.30	.16
	Home-Bound Instruction	.02	.04
	Residential Schools	.07	.05
	Alternative Programs	.02	.28
Health Services	Screening & Assessment	.50	.35
	Primary Care	.21	.09
	Acute Care	.16	.15
	Long-Term Care	.09	.08
Vocational Services	Vocational Assessment	.21	.33
	Vocational Skills Training	.07	.08
	Work Experiences	.05	.09
	Shelter Employment	.01	.04
Recreational Services	After School Programs	.02	.04
	Summer Camps	.11	.09
Operational Services	Case Management	.32	.35
	Transportation	.33	.35
	Advocacy	.12	.42
Scope of Service Index		.48	.05

a The Scope of Service Index is a summative score that represents the degree to which clients receive multiple services. It can range from 0 to 1.0 and represents the respondent's perceptions of service implementation. It is computed for each respondent by adding the scores assigned to each of the 31 service categories and dividing by 31. The overall Index is the average of the respondents' scores.

As a means of summarizing these data, we computed a Scope of Service Index. The questionnaire of a worker who had every single one of his/her clients receiving all 31 services would indicate that the system has the broadest possible orientation, and it would be assigned a score of 1.0; the questionnaire of a worker who had his/her clients receiving only one service would be assigned a score of.03. In Delaware County, the average scope of service score was .48, and the standard deviation was .05 (meaning that 66% of the scores ranged from .73 to .83). In general terms these scores indicate that SED children in Delaware County are viewed by the staff members as having broad service plans.

Case Coordination and Administrative Coordination

One of the most important aspects of interagency service delivery systems, one that attracts the most attention, is coordination. Although this term is used with great frequency, there is not always agreement about its meaning. As used in this study, interagency coordination refers to methods that internally regulate a system. When interorganizational coordination exists, many aspects of the work activity are so governed that the effort of each individual organization is directed toward common objectives and goals. When coordination does not exist, organizations have few restrictions and are free to choose their own objectives and methods, which may be consistent with or conflict with those of other organizations.

Case Coordination. Staff must often work closely with staff in other agencies. The need for case coordination is profoundly affected by the way that clients flow through a system. There are three basic client flow patterns. In the Sequential Method, organizations make referrals to and accept referrals from other agencies in the system (clients flow from one organization to another but are served by only one at a time). In the Reciprocal Method, organizations make and accept referrals from more than one organization in the system (clients are served simultaneously by more than one agency). In the Team Method, organizations share the work of serving or treating clients (clients are served by agencies whose treatment staff have developed together one treatment plan and who constitute one intervention team).

If the pattern is sequential—as in a system where adolescents are referred from home to hospital, to group facility, and home again—there is little necessity for case coordination across organizational boundaries, because patients are treated by one organization at a time. At the other extreme is the team pattern, as in a system that serves multi-problem families, where is there a compelling necessity for a high level of case coordination because the child has to be treated simultaneously by workers from numerous agencies.

We asked workers (N=13) in Delaware County what percentage of their SED clients progressed through their system in each of these three patterns. Their responses are shown in Table 4.6, which shows that the most frequently used client flow pattern is reciprocal: 42% of the time SED clients are served simultaneously by workers who do not meet in face-to-face staffings. The second most used client flow is the sequential (40%) followed by the team pattern (18%).

As a way of summarizing these data, we computed a Total Case Coordination Score. Based on the theory described above—that simultaneous services from multiple organizations require high levels of case coordination—we weighted the scores for each type of coordination method so that team methods received the most weight, followed by reciprocal methods and then sequential methods. This means of assessing the amount of case coordination within the Delaware system produced a score of 1.52 with a standard deviation of .31. As we see when we compare this score with the other counties in this study, Delaware County exhibited a moderate level of case coordination.

Table 4.6 Perceptions of Staff Respondents Regarding Percentage of their SED Clients that Flow Through the Delaware County Service Delivery System in a Sequential, Reciprocal, or Team Pattern (N=13)

Case Coordination Pattern	Mean	SD
Sequential	.40	.30
Reciprocal	.42	.33
Team	.18	.10
Total Case Coordination Score[a]	1.52	.31

[a] Total Case Coordination Score is a summative weighted score that represents the total case coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by adding the percentages assigned for each of the three patterns that have been weighted according to the amount of feedback they provide: (Sequential * 1) + (Reciprocal * 1.5) + (Team * 3.0). The overall score is the average of the respondents' weighted scores.

Administrative Coordination. Staff members are not the only persons in service delivery who are asked to mesh their work with persons in other agencies. Administrators will coordinate their services with others if they perceive a need for compatibility between programs. For example, if my agency provides service X, and if, in order for my service to be effective, my client must also be receiving service Y (which is provided another agency), then I will work to insure that my client can get service Y and that it is compatible (offered when, where, and how my client needs it). This means that as an administrator I will monitor various incompatibilities that occur when programs reside in different organizations with different perspectives about how clients should be treated. I will seek to feed back into the system information about incompatibilities when they occur, and I will do this by sharing information and making decisions with administrators of other agencies in the system. As interagency systems move toward an increasing emphasis on effective services to multi-problem clients, the greater is the need for information feedback via group planning and decision making structures as opposed to impersonal rules and plans.

Methods of administrative coordination can be thought of, therefore, as varying with regard to the amount of information feedback required to implement them. Three methods, which utilize increasing amounts of feedback, were used as indicators of the amount of coordination. Administrative coordination by Impersonal Programming includes the utilization of plans, rules, regulations, agreements, contracts, or anything which removes discretion from individual workers and requires little information feedback. Administrative coordination by Personal Feedback includes the use of person-to-person contact between workers, or the designation of an individual to act as coordinator in order to expedite planning and decision-making across organizational boundaries. Administrative coordination by Group Methods means feedback which is obtained through face-to-face communication by two or more individuals planning and making decision by consensus.

Going from impersonal, to personal, to group methods means we are achieving higher levels of coordination. In fact, the weights we assign to the coordination scores are based on the assumption that group methods achieve three times more coordination than do impersonal methods.

Table 4.7 shows how the six administrators of SED programs in Delaware County perceive the use of impersonal, personal, and group methods of coordination among the agencies in their system.

Table 4.7. Administrators' Perceptions Regarding Percent of Time Impersonal, Personal, and Group Methods of Coordination are Used (N=6)

Methods of Administrative Coordination	Mean	SD
Impersonal Methods (legally binding laws, rules; written interagency agreements; unwritten interagency agreements)	.45	.31
Personal Methods (administrators or staff acting as coordinator; informal communication)	.42	.27
Group Methods (standing committees; ad hoc committees)	.14	.09
Total Administrative Coordination Score [a]	1.47	.29

[a] Total Administrative Coordination Score is a summative weighted score that represents total administrative coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by adding the percentages assigned to the three methods of coordination which have been weighted according to the amount of feedback they provide: (Impersonal * 1) + (Personal * 1.5) + (Group * 3.0). The overall index is the average of the respondents' weighted scores.

Table 4.7 shows that impersonal methods are thought to be the dominant method by which administrators coordinate their programs in Delaware County. In fact, almost half (45%) of the time impersonal methods are used. Personal methods, however, are almost as popular. In Delaware County, group methods are used very seldom (14%).

As a way of summarizing these data we computed a Total Administrative Coordination Score. Based on the theory described above—that increasing amounts of feedback produce increasing amounts of coordination—we weighted the scores for each type of coordination method so that group methods received the most weight, followed by personal methods and the impersonal methods. This means of assessing the amount of coordination within the Delaware systems produced a score of 1.47 with a standard deviation of .29. As we see when we compare this score with the other counties in this study, Delaware County exhibited a fairly low level of coordination.

Evaluation of the Delaware System

Today many believe that family and child services should be accessible, available, high in quality, well coordinated, integrated, and standardized in terms of eligibility requirements and operating procedures. In addition, children and adolescents with mental health problems should be identified early, and services should be family- centered and community-based, should be individualized and provide for the least restrictive treatment, and should encourage family participation and the child's smooth transition to adulthood.

We asked both administrators and staff how they would measure their system against these standards. Because we were interested in trying to assess the impact of the CASSP grants in moving the system toward these goals, we asked respondents the degree to which these characteristics exist today and the degree to which they existed three years ago, and then we calculated the difference. The range of differences was broken down into descriptive categories.

Staff Responses. Staff responses are shown in Table 4.8. The most frequent responses were Some Improvement (30%), followed by Little Improvement (27%), with Much Improvement (24%) a close third.

Administrative Responses. The results from administrative respondents (N=6) are shown in Table 4.9. Overall, the most frequently given response by administrators was Little Improvement (36%), followed by Some Improvement (30%).

Table 4.8 Perceptions of Staff Members in Delaware County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=16)

	Extent of Change During Past Three Years Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	0 %	29%	57 %	14 %
Available	0	0	17	67	17
High in Quality	0	14	0	57	29
Well Coordinated	0	14	14	29	43
Integrated	0	14	14	57	14
Standardized	0	0	29	43	29
Capable of Further Improvement	0	29	29	14	29
In regard to the following core values and principles:					
Early Identification	0	0	29	43	14
Family-Centered	0	0	43	14	43
Community-Based	0	0	43	29	29
Individualized Service	0	0	29	29	43
Least Restrictive	0	0	43	29	29
Family Participation	0	0	57	14	29
Smooth Transition to Adulthood	0	0	43	57	0
Mean Percent of Responses in Each Category	0 %	5 %	27 %	30 %	24 %

Note: Percentages may not sum to 100, due to rounding.

Table 4.9 Perceptions of Administrators in Delaware County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=6)

	Extent of Change During Past Three Years Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	0 %	33 %	50 %	17 %
Available	0	0	50	17	33
High in Quality	0	0	67	17	17
Well Coordinated	0	17	17	33	33
Integrated	0	0	33	33	17
Standardized	0	0	67	17	0
Capable of Further Improvement	17	0	67	17	0
In regard to the following core values and principles:					
Early Identification	0	0	17	67	17
Family-Centered	0	0	50	33	0
Community-Based	0	0	33	50	33
Individualized Service	0	0	33	33	33
Least Restrictive	0	0	17	67	0
Family Participation	0	17	50	17	0
Smooth Transition to Adulthood	0	0	50	33	0
Percent of Responses in Each Category	1 %	2 %	36 %	30 %	11 %

Note: Percentages may not sum to 100, due to rounding.

Conclusions

This case study gives us a considerable amount of information about the Delaware County SED service delivery system. It has described its range of services, its structure, and provided some data about its orientation and performance.

Delaware County does not have a comprehensive mental health service system for children and youth. There are only 4 out of 10 core services available in the county, and the caseload capacity is very small. There are very serious gaps that create difficult problems for providers and families. Delaware County lacks:

1. Diagnostic Services
2. Day Treatment
3. Therapeutic Group Homes
4. Therapeutic Foster Care
5. Residential Treatment
6. Inpatient Hospitalization

It is unlikely that Delaware County has the population base to support residential treatment, but diagnostic services and day treatment are badly needed and should be developed. The only outpatient treatment available for children is at the hospital and expanding the availability of this service should also be a priority.

The data on referral linkages and interaction among organizations in this system showed that, because there were few services and because they were located so distantly, the Delaware system does not appear to be a system. The number of referrals were few, given the potential size of the SED population, and the amount of administrative coordination and case coordination effort appeared to be low to moderate.

This conclusions of ours was underscored in our interviews with administrators and staff in the county. They said repeatedly that it does not feel as if there is a system of services in Delaware County. Without a mental health center or family service agency in the county, the only centralizing agency is the Department of Human Services. Several persons remarked that if a family is DHS eligible, then there is a system of sorts, but if not, then there is no system locally.

Even if a family is DHS eligible, Delaware County is resource poor. This is the predominant theme echoed in each of the interviews. Several persons pointed out that family counseling was very limited. The social worker from Families, Inc. was in the county only one day a week and she was overwhelmed. Service gaps mentioned most often were intensive in-home family counseling, sexual abuse treatment, and day treatment. The need for day treatment was mentioned repeatedly: several of those interviewed said that they are seeing an increasing number of violent and aggressive children that they can't handle in less intensive programs.

There was a consensus, however, in Delaware County that the CASSP grant, although only $10,000, was money very well spent. It was available at a time when the county was experiencing trauma, and the activities were aimed at using those conditions to improve awareness and the level of information about mental health issues. All staff interviewed felt that mental health topics that formerly were non-issues or taboo subjects were now openly discussed. This has been the major achievement of the grant.

V. Case Study of SED Service System in Polk County

Polk County
SED Service System

Polk is an urban county with a total population of over 300,000 located slightly southwest of the center of the state. It is the state capital and serves as the center for commerce and service delivery, and the large population base supports a large and complex network of health, mental health, educational, and social service organizations. In each category Polk County has a wide range of agencies providing preventative, at-risk, and tertiary care.

Activities and Accomplishments of the CASSP Grant

This is a study of mental health services and treatment programs for children that reside in Polk County, Iowa. It incorporates information about child mental health services and the system of care in this county. It is not meant to be an exhaustive study, but is a profile and sketch of the subject. It should be remembered that this is cross sectional data collected in the spring of 1990 and, as such, is a snapshot of only one point in time. Interorganizational systems are organic and ever changing.

The Polk County CASSP project, rather than being the result of a specific traumatic event, was the natural outgrowth of a number of interagency cooperative efforts that had been occurring over a period of time. Because Polk County encompasses Des Moines, the state's capital and largest city, it has a rich and varied array of human service and health care agencies. The organizations in Polk County have for many years been involved in county wide planning and coordinating activities. When the CASSP grant was awarded to Polk in 1986 it was one in a long series of interagency projects.

The Polk County CASSP Planning Council accomplished a number of tasks during the project period. First, they published a Directory of Child and Adolescent Mental Health Services in Polk County. The directory contained descriptions of about 30 agencies in Polk Co., their services for children and adolescents, and information on fees and contact persons. The directory was distributed to agencies and groups in the county.

Second, in cooperation with the state CASSP project they conducted a comprehensive needs assessment of unmet needs of children and adolescents. The survey focused on training needs for staff of mental health centers, private providers, foster care programs, the Iowa Department of Human Services staff, and the Area Education Agency staff. The results were used to plan on going professional development activities not only in Polk County but throughout the state.

Third, the Polk County project was also instrumental in creating two interagency coordinating structures. The Interagency Sexual Abuse Program (ISAP) is a case coordinating committee that meets weekly and is composed of members from the Des Moines Child Guidance Center, Victims Services, and Broadlawns Hospital. The second is a consultation team that meets monthly to review adolescent cases. Its membership is flexible, but the core agencies are the Des Moines Child Guidance Center, Youth Law Center, Visiting Nurse Association, and private pediatricians.

However, everyone interviewed for this study agreed that the most important achievements of the Polk County project are less tangible than the outcomes listed above. There are really two most valuable outcomes: first, greater awareness of mental health services as a vitally important part of the broader system of family and children's services and, second, an attitude among the organizational leadership in Des Moines that places great importance on cooperative planning and program development.

The initiation of the Decategorization Project in Polk County is attributed in part to the interorganizational learning that took place during the 1987-1988 CASSP grant period. It is probably true that Polk County would have gone into decategorization regardless of whether the county had had a CASSP grant, but the way decategorization has developed in Polk has been influenced by the increased awareness and emphasis on mental health that was stimulated by CASSP. There is consensus that Decat's current priority of developing ways of serving SED children and adolescents was affected by CASSP.

There is agreement that in Polk County CASSP has been absorbed by Decategorization; that there is no longer a need for, nor should there be, separate planning and coordination structures. Among the agency directors of mental health organizations that we interviewed, there did not appear to be apprehension that their concerns would be engulfed by broader concerns and problems of the child welfare agencies. Rather, there appeared to be genuine commitment to the idea that the best way to improve child mental health services was through cooperative planning and program development with the wide range of family and child serving organizations. Put another way, there was a clear understanding that the mental health system in Polk County is a sub-system of a larger family service system and that its effectiveness is enhanced by cooperation with the larger system.

Characteristics of the Polk County System

The interagency service system for SED children in Polk County is described below in some detail and is summarized by the profile shown in Table 5.1.

Table 5.1. Profile of the Polk County Service Delivery System

Total Number of Children [1]		95,314
Ages 0 to 9	44,007	
10 to 19	51,307	
Children Needing Mental Health Services [2]		11,247
Seriously Emotionally Disturbed (SED) Children [2]		5,624
Children Placed Outside County Who Should Be Served In County [3]		195
Number of Agencies		17
Number of SED Programs[4]		42
Average Size of Caseload Per Program		
Monthly Minimum		4
Monthly Maximum		753
Monthly Average		74
Average Number of Referrals Per Agency		
Monthly Minimum		2
Monthly Maximum		199
Monthly Average		39

[1] Source: 1980 U.S. Population Census.

[2] The commonly accepted estimate of the need for mental health services among children is approximately 11.8%; about half fall into the most serious category (Gilmore, Chang, & Coron, 1984).

[3] Point-in Time DHS/JCS Study (5-18-90).

[4] A program is a discrete service offered by the staff of an organization.

The Census data taken in 1980 indicated that there were over 5,600 SED children in Polk County; that figure could easily be over 6,000 in 1990. This population is, of course, many times larger than the SED populations of the other study counties. There are a large number of organizations providing service to these clients; 17 were selected for inclusion in this study.

Comprehensiveness and Accessibility of Services. The organizations from which data were collected are as follows:

No. of Linkages	Organization Name
154	Polk Co. Department of Human Services
91	Des Moines Public Schools
130	Spectrum/Methodist Hospital
82	Orchard Place
70	Youth Emergency Service & Shelter
69	Broadlawns Medical Center
65	Polk County Juvenile Court
41	Des Moines Child & Adolescent Center
35	Polk Co. Youth Services & Shelter
33	Youth Law Center
32	Iowa Lutheran Hospital
26	Iowa Lutheran Social Services
21	Our Primary Purpose
21	Iowa Children & Family Services
8	Mercy Psychological Services
3	Charter Hospital
3	YSS - Homeless Youth

This is not a complete list of all the organizations in Polk County that provide services to SED clients. We chose organizations based on the number of linkages that each organizations identified and on information about the referral pattern. The organizations we identified but did not include in this study were: Polk Co. Area Education Agency, Polk Co. Private and Public Schools, Citizen Advocate, Hobart Ross Youth Home, Polk Co. Mental Health Center, Polk Co. Intra Family Sex Abuse, Anbery Counseling Services, Parents Anonymous, Polk Co. Victim Services, Big Brothers/Big Sisters, and Urban Dreams. In addition, there were five other organizations that had only one linkage to an organization listed above: Polk County Mental Health Center, Polk County Public Schools, Hobart Ross Youth Home, Polk County Victim Services, Citizens Advocate, the Polk County Intra-Family Sex Abuse Program. There are undoubtedly still other agencies operating independently without apparent linkages to the system. The necessity to exclude should not be construed as meaning that the excluded organizations do not play a role in the SED system.

The 17 organizations listed above provide a total of 42 discrete programs to residents of Polk County. Of all the programs surveyed, the smallest average caseload we found was 4 open cases per month, while the largest was the Des Moines Child Guidance Center with 753 open cases per month. A list of these 42 direct services with their average monthly caseloads is shown in Table 5.2.

Table 5.2 Core and Support Mental Health Services in Polk County

CASSP Core Mental Health Services	Provider Agency	Monthly Average Caseload
Consultation and Education	Decat Committee	
Nonresidential Treatment		
• Diagnostic Services	Des Moines Child Guidance Center	140
	Mercy Psychological Services	52
• Outpatient Treatment	Des Moines Child Guidance Center	753
	Broadlawns Hospital	25
	Methodist Hospital	15
	Mercy Psychological Services (sex offenders)	104
• Day Treatment	Des Moines Child Guidance Center	33
	Orchard Place	30
	Methodist Hospital	18
	Broadlawns Hospital	28
• Crisis Intervention	Broadlawns Hospital	6
	Charters Hospital	5
	Methodist Hospital	4
	Lutheran Hospital	10
• Home-Based Treatment	Des Moines Child Guidance Center	19
	Iowa Children & Family Service	21
	Lutheran Social Services	33
	Orchard Place (follow-up)	15
	Methodist Hospital (failure-to-thrive)	25
Residential		
• Therapeutic Foster Care	Iowa Children & Family Service	4
	Lutheran Social Services	4
• Residential Treatment	Orchard Place	78
	SED Out-of County Placements	(76)
	Delinquent Out-of-County Placements	(69)
	MR/DD Out-of-County Placements	(15)
	CHINA Out-of-County Placements	(34)
	Alcohol Out-of-County Placements	(4)
	Other Out-of-County Placements	(12)
• Inpatient Hospitalization	Broadlawns Hospital	16
	Charters Hospital	12
	Methodist Hospital	15
	Lutheran Hospital	25
• Case Management	Department of Human Services	100
	Juvenile Court Services	60
SUBTOTAL		1,650

Essential Support Services	Provider Agency	Monthly Average Caseload
Social Services		
Child Protection	Department of Human Services	450
	Lutheran Social Services	
Juvenile Shelter	Polk County Youth Services	20
	Youth Emergency Shelter & Services (YESS)	16
	Youth Shelter Services (YSS)	14
Counseling/Education	Polk County Youth Services	35
	Youth Emergency Shelter & Service (YESS)	10
Educational Services		
Assessment & Planning	Des Moines Public Schools	25
In Day Treatment Programs	Des Moines Public Schools	165
In Residential Programs & Hospitals	Des Moines Public Schools	128
In Self-Contained Classrooms	Des Moines Public Schools	180
Chemical Dependency Treatment		
Outpatient	Our Primary Purpose	120
Inpatient	Our Primary Purpose	60
Other Services		
Legal Services	Youth Law Center	180
GRAND TOTAL		3,053

• Core Services

The inventory of services in Table 5.2 shows a total average monthly caseload of 3,053 open cases for the total system. This does not include the out-of-county placements for therapeutic Group Care which total 210 cases. Given that there are 42 programs represented on this list (excluding the Decat Committee and out-of-county placements), the average caseload per program is 74. On the whole, these are much larger programs than those found in the other counties, where the average caseloads are all under 20 per program.

Does this large number of agencies and large program size mean that a larger proportion of the estimated SED population is being served in Polk County? Yes, we think it does. It appears that over half (54%) of the seriously emotionally disturbed children are receiving some type of service. [This estimate may be inflated, of course, because the average monthly caseload of 3,053 is not an unduplicated count of individual children.]

The Structure of the System. The 17 organizations included in the Polk County study reported a total of 706 intra system referrals each month. [These referrals are also duplicative; we do not know from this data how many individual children, on the average, received a service referral.] Table 5.3 shows the 17 organizations in the system and the volume of referrals that each reported making to the other 16 organizations in the system.

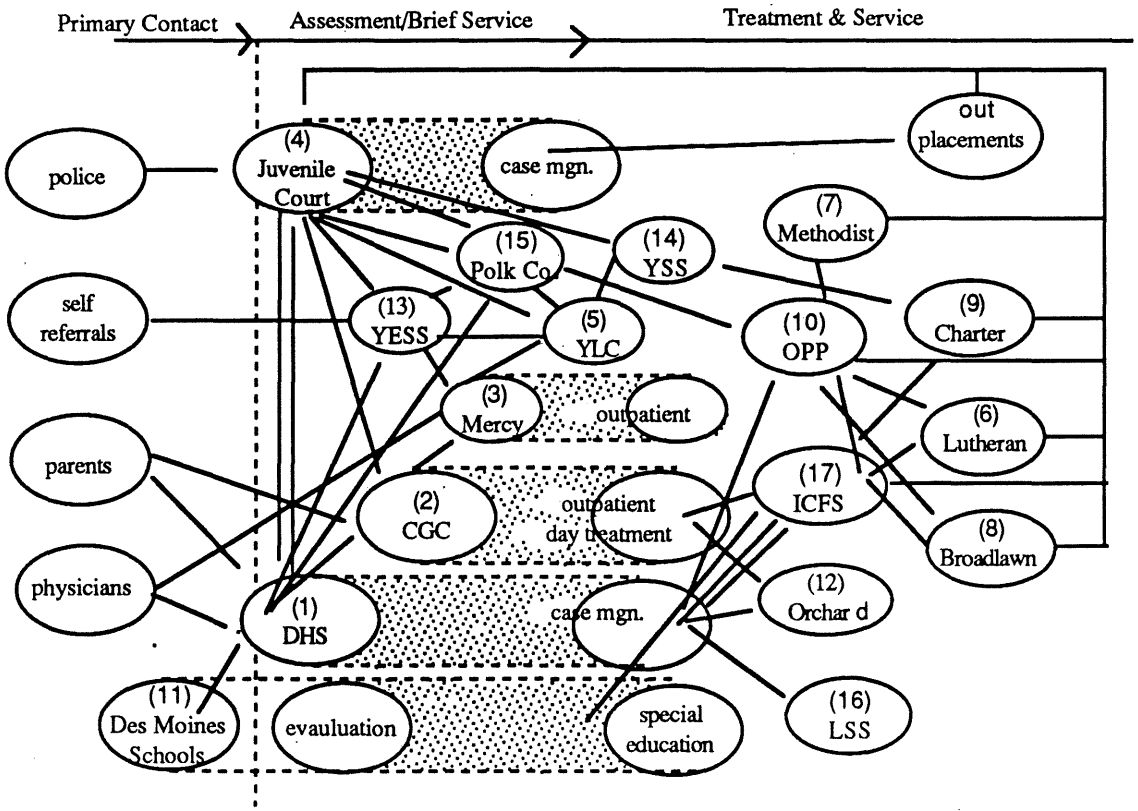
Table 5.3. Polk County Client Referral Matrix (average number of referrals per month)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Total
1 DHS	---	22	10	5	4		4	1				10	20	16	18	30	41		18	199
2 Child Guidance	6	---	1	2								4								13
3 Mercy Psych	10	1	---	12	1			3	1	1			3	4						36
4 Juvenile Court	10	15	12	---	8	3	1	9	1			10	20	5	9		10			113
5 Youth Law Ctr			1	1	---								5							7
6 Lutheran Hos.		2		3		---	1					5								11
7 Methodist Hos.	5	2		1	1	3	---	2	1		4	2	2		1					24
8 Broadlawns Hos	4	2		5	1		1	---				3	1		3					20
9 Charter Hos.		2					1		---											3
10 OPP			5							---										5
11 Pubic Schools	1	5	1	1		2	4	4		4	---	9	15	2	2					50
12 Orchard Place		10			1	3	2	3				---								19
13 YESS	15			30	20			9				2	---				3			79
14 YSS			2											---						2
15 Polk Co. Youth	3		10		2						15	3		3	---		2			38
16 LSS			2													---				2
17 ICFS		10		1		1		3	5								---			20
18 Private Drs.		65																		65
19 Out Placements																				0
Total	54	136	44	61	38	12	14	34	8	5	19	48	66	30	33	30	56	0	18	706

In a system of organizations that is serving the same client population, it is often necessary, because clients have multiple problems, to refer clients to other organizations for services. There are, then, potentially two linkages between each pair of agencies: one going one direction and one going the other direction. Each cell in the matrix represents a "channel" by which a client is referred from one organization to another. In Polk County, with 17 organizations in the service system, it is possible to have 272 client referral channels. The referral data collected in Polk County indicates 104 one way referrals, or 38 % of the potential channels being used.

To describe large and complex interorganizational systems graphically is difficult because a graph must simplify reality and yet portray reality accurately. Figure 5.1 is our attempt at depicting the structure of the SED service system in Polk County in graphic form. This diagraph is a model of the real world, simplified to make it easily understood, but representative of the actual flow of SED clients through the agencies in Polk County.

Figure 5.1 Polk County SED Service Delivery System



The graphic Figure 5.1 illustrates how children and adolescents flow through the Polk County SED service system. There are four point of early identification and prevention: physicians, police, parents, school, and children themselves. These individuals and organizations make referrals to a number of organizations for assessment: (1) Department of Human Services, (2) Child Guidance Center, (3) Mercy Psychological Services, (4) Juvenile Court, and (13) Youth Emergency Shelter & Services and (15) Polk Co. Youth Shelter for short term shelter and care. There is a very wide range of organizations that provide treatment services in addition to those

named above: (5) Youth Law Center, (10) Our Primary Purpose, (6) Lutheran Hospital, (7) Methodist Hospital, (8) Broadlawns Hospital, (9) Charter Hospital, (12) Orchard Place, (14) Youth & Shelter Services, (16) Lutheran Social Service, and (17) Iowa Children & Family Services.

The graph of the Polk County system is meant to illustrate its recursive nature, a characteristic that many administrators worry about and talked about in interviews. It appears there is a significant portion (further research is needed in order to estimate the number) of children who experience the system as a cycle: primary contact, to acute or emergency care agency, to on-going treatment, to discharge back to primary contact. This cyclic pattern is particularly visible in the Polk County system because of its large size and the large number of inpatient and residential care facilities.

On the basis of the Referal Matrix and the Diagraph, it appears that there are six clusters of agencies serving SED children in Polk County.

Cluster #1: Comprised of the Polk County Department of Human Services and the Des Moines Public Schools, this group has significant linkages to all other groups in the network. This group is a major point of intake and assessment of youth and it is central to communications, reporting, funding and resource transactions in the network.

Cluster #2: Including Des Moines Child Guidance, Lutheran Hospital, and Iowa Children and Family Services, this group provides a range of outpatient and inpatient counseling and mental health services, including assessment, day treatment, family treatment, group home/therapeutic foster care, and inpatient mental health. This group tends to care for younger, less disturbed, non-crisis kids; it interacts (client referrals, communications) with cluster #6 but has no linkages reported to cluster #4.

Cluster #3: Comprised of the Juvenile Court, this group is a second key point for intake (reentry) and tracking of services for some kids. This cluster has significant linkages to most other groups. It is a secondary hub in a relatively unified structure.

Cluster #4: Including The Youth Law Center (YLC), the Youth Emergency Services and Shelter (YESS) and the Polk Co. Youth Services and Shelter, this cluster plays a role in assessment and emergency management for the most severely disturbed, juvenile justice clients.

Cluster #5: This cluster includes Mercy Psychological services, Methodist Hospital, Charter Hospital, Our Primary Purpose (OPP), Lutheran Hospital, and Youth Shelter and Service (YSS). These provide a range of specialty assessment, inpatient (chemical dependency) and emergency services. The group is characterized by a more limited linkage to the network than other groups.

Cluster #6: This cluster appears to provide inpatient and family care services for the most severely disturbed kids. It interacts frequently with members of other groups which have more limited and specialized treatment organizations. It includes Orchard Place, one of the central organizations in the referral network and a key comprehensive inpatient, day treatment and follow-up agency. Also included are Lutheran Social Service and Broadlawns Medical Center, for family care and inpatient care respectively.

Centrality is an important structural dimension of interagency systems, because it is related to the ease with which people can communicate with each other and coordinate their work. The more a system has a dominant central core agency, the more likely it is that the system will run smoothly.

In Polk County, centrality scores based on interactions between organizations show a quite centralized structure (overall centrality .441). Since the service system in Polk County is large, a more centralized system is necessary for more efficient interactions. The most central organizations identified were the Department of Human Services, Orchard Place, Des Moines Public Schools, and Juvenile Court.

Orientation to Clients

In addition to the size and structure of an interagency system, the orientation of workers to their clients has an important influence on the way that the system functions. Below we look at the scope of service, meaning the breadth of both assessment and service delivery.

Scope of Assessment. As knowledge has grown, our perceptions of human behavior have become more complex. The increase in knowledge has also meant that many more clients are diagnosed as having multiple problems and needing multiple services. This phenomenon is also producing more variation in the way that different human services assess children and prepare service plans. Some professionals use many categories when doing an assessment, while others take a narrow view of their clients.

In this study we were interested in determining how broadly workers in Iowa's SED service systems viewed their clients. We therefore listed the four major categories of internal biological functioning (communication, intelligence, physiology, and emotions) and two categories of external functioning (social and the concrete environment). We asked workers in Polk County (N=93) to estimate the percentage of their SED clients that exhibited problems in each of these six categories. The results are shown in Table 5.4.

As is to be expected in mental health service delivery systems, the problems exhibited by the most clients as perceived by their workers were emotional dysfunction (76%) followed by social dysfunction (72%), environmental deficit (41%), intellectual impairment (40%), communication dysfunction (39%), and physiological impairment (13%).

As a means of summarizing these data, we computed a Scope of Assessment Index. A worker who viewed every single one of his/her clients as having problems falling into all six categories would have the broadest possible orientation and would be assigned a score of 1.0, while the worker who assessed her/his clients as exhibiting only one type of problem would be assigned a score of .16. In Polk County, the average scope of assessment score was .59, and the standard deviation was .20 (meaning that 66% of the scores ranged from .39 to .79). In general terms these scores indicate that the Polk County SED system takes a broad orientation to its clients in terms of assessment.

Table 5.4 Perceptions of Staff Members in Polk County Regarding Percent of their SED Clients that Exhibit Problems in Each of Six Assessment Categories (N=93)

Problem	Mean	SD
Communication Dysfunction	.39	.33
Intellectual Impairment	.40	.30
Emotional Dysfunction	.76	.31
Environmental Deficit	.41	.33
Physiological Impairment	.13	.15
Social Dysfunction	.72	.32
Scope of Assessment Index [a]	.59	.20

[a] The Scope of Assessment Index is a summative score which represents the level of coordination effort. The Index can range from 0 to 1.0 and represents the respondent's breadth of assessment. It is computed for each respondent by adding the scores for each respondent assigned to each of the six diagnostic categories and dividing by six. The overall Index is the average of the respondents' scores.

Scope of Service. Another way to describe a system's orientation to clients is to ask: how comprehensive is the service plan for each client; to what degree are clients receiving multiple services? Description of a comprehensive mental health system for children and adolescents contains many services deemed essential. The framework used for this study contains seven categories of services (mental health, social, educational, health, vocational, recreational, and operational). Within each category there are multiple services, for a total of 31 services.

Workers in Polk County were asked for their perceptions regarding the percentage of the SED clients that received each of these 31 services. The results are shown in Table 5.5, which shows that the service utilized by SED children most frequently was educational assessment, with 69% of children participating, health screening (67%), case management (63%), advocacy (57%), financial assistance (56%), outpatient therapy (51%), and child protection (45%).

As a means of summarizing these data, we computed a Scope of Service Index. The questionnaire of a worker who viewed every single one of his/her clients as receiving all 31 services would indicate that the system has the broadest possible orientation, and it would be assigned a score of 1.0; the questionnaire of a worker who viewed his/her clients as receiving one service would be assigned a score of .03. In Polk County, the average scope of service score was .28, and the standard deviation was .12 (meaning that 66% of the scores ranged from .16 to .40). In general terms, these scores indicate that SED children in Polk County are viewed by the staff members as having narrow service plans.

Table 5.5 Perceptions of Staff Members in Polk County Concerning the Percent of their SED Clients that Receive Each of 31 Services (N=93)

		Mean	S.D.
Mental Health Services	Outpatient Treatment	.51	.36
	Home-Based Services	.35	.80
	Day Treatment	.21	.28
	Therapeutic Foster Care	.21	.30
	Therapeutic Group Care	.31	.31
	Inpatient Hospitalization	.31	.31
Social Services	Protective Services	.45	.32
	Financial Assistance	.56	.34
	Respite Care	.11	.23
	Shelter Services	.26	.29
	Foster Care	.26	.31
	Adoption	.07	.16
Educational Services	Assessment & Planning	.69	.35
	Resource Rooms	.35	.31
	Self-Contained Special Ed.	.39	.34
	Home-Bound Instruction	.06	.10
	Residential Schools	.26	.31
	Alternative Programs	.20	.25
Health Services	Screening & Assessment	.67	.37
	Primary Care	.43	.43
	Acute Care	.13	.25
	Long-Term Care	.07	.17
Vocational Services	Vocational Assessment	.30	.62
	Vocational Skills Training	.18	.26
	Work Experiences	.16	.23
	Shelter Employment	.03	.09
Recreational Services	After School Programs	.15	.29
	Summer Camps	.07	.13
Operational Services	Case Management	.63	.40
	Transportation	.37	.37
	Advocacy	.57	.43
Scope of Service Index[a]		.28	.12

a The Scope of Service Index is a summative score that represents the degree to which clients receive multiple services. It can range from 0 to 1.0 and represents the respondent's perceptions of service implementation. It is computed for each respondent by adding the scores assigned to each of the 31 service categories and dividing by 31. The overall Index is the average of the respondents' scores.

Case Coordination and Administrative Coordination

One of the most important aspects of interagency service delivery systems, one that attracts the most attention, is coordination. Although this term is used with great frequency, there is not always agreement about its meaning. As used in this study, interagency coordination refers to methods that internally regulate a system. When interorganizational coordination exists, many aspects of the work activity are so governed that the effort of each individual organization is directed toward common objectives and goals. When coordination does not exist, organizations have few restrictions and are free to choose their own objectives and methods, which may be consistent with or conflict with those of other organizations.

Case Coordination. Staff must often work closely with staff in other agencies. The need for case coordination is profoundly affected by the way that clients flow through a system. There are three basic client flow patterns. In the Sequential Method, organizations make referrals to and accept referrals from other agencies in the system (clients flow from one organization to another but are served by only one at a time). In the Reciprocal Method, organizations make and accept referrals from more than one organization in the system (clients are served simultaneously by more than one agency). In the Team Method, organizations share the work of serving or treating clients (clients are served by agencies whose treatment staff have developed together one treatment plan and who constitute one intervention team).

If the pattern is sequential—as in a system where adolescents are referred from home to hospital, to group facility, and home again—there is little necessity for case coordination across organizational boundaries, because patients are treated by one organization at a time. At the other extreme is the team pattern, as in a system that serves multi-problem families, where is there a compelling necessity for a high level of case coordination because the child has to be treated simultaneously by workers from numerous agencies.

We asked workers (N=93) in Polk County what percentage of their SED clients progressed through their system in each of these three patterns. Their responses are shown on Table 5.6, which shows that the most frequently used client flow pattern was sequential: 49% of the time SED clients were served by a single organization and then referred on to another. The second most used client flow was the reciprocal pattern (32%) followed by the team pattern (19%).

As a way of summarizing these data, we computed a Total Case Coordination Score. Based on the theory described above—that simultaneous services from multiple organizations require high levels of case coordination—we weighted the scores for each type of coordination method so that team methods received the most weight followed by reciprocal methods and then sequential methods. This means of assessing the amount of case coordination within the Polk system produced a score of 1.16 with a standard deviation of .17. As we see when we compare this score with the other counties in this study, Polk County exhibited a low level of case coordination.

Table 5.6 Perceptions of Staff Members in Polk County Regarding Percentage of their SED Clients that Flow Through the Polk County Service Delivery System in a Sequential, Reciprocal, or Team Pattern (N=93)

Case Coordination Pattern	Mean	SD
Sequential	.49	.33
Reciprocal	.32	.32
Team	.19	.25
Total Case Coordination Score[a]	1.16	.17

[a] Total Case Coordination Score is a summative weighted score that represents the total case coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by adding the percentages assigned for each of the three patterns that have been weighted according to the amount of feedback they provide: (Sequential * 1) + (Reciprocal * 1.5) + (Team * 3.0). The overall score is the average of the respondents' weighted scores.

Administrative Coordination. Staff members are not the only persons in service delivery who are asked to mesh their work with persons in other agencies. Administrators will coordinate their services with others if they perceive a need for compatibility between programs. For example, if my agency provides service X, and if, in order for my service to be effective, my client must also be receiving service Y (which is provided another agency), then I will work to insure that my client can get service Y and that it is compatible (offered when, where, and how my client needs it). This means that as an administrator I will monitor various incompatibilities that occur when programs reside in different organizations with different perspectives about how clients should be treated. I will seek to feed back into the system information about incompatibilities when they occur, and I will do this by sharing information and making decisions with administrators of other agencies in the system. As interagency systems move toward an increasing emphasis on effective services to multi-problem clients, the greater is the need for information feedback via group planning and decision making structures as opposed to impersonal rules and plans.

Methods of administrative coordination can be thought of, therefore, as varying with regard to the amount of information feedback required to implement them. Three methods, which utilize increasing amounts of feedback, were used as indicators of the amount of coordination. Administrative coordination by Impersonal Programming includes the utilization of plans, rules, regulations, agreements, contracts, or anything which removes discretion from individual workers and requires little information feedback. Administrative coordination by Personal Feedback includes the use of person-to-person contact between workers, or the designation of an individual to act as coordinator in order to expedite planning and decision-making across organizational boundaries. Administrative coordination by Group Methods means feedback which is obtained

through face-to-face communication by two or more individuals planning and making decision by consensus.

Going from impersonal, to personal, to group methods means that we are achieving higher levels of coordination. In fact, the weights we assign to the coordination scores are based on the assumption that group methods achieve three times more coordination than do impersonal methods.

Table 5.7 shows how administrators of SED programs in Polk County perceived the use of impersonal, personal, and group methods of coordination among the agencies in their system. Impersonal methods are thought to be the dominant method by which administrators coordinate their programs. In fact, half (50%) of the time impersonal methods are used. Personal methods (32%) and administrative groups are the next most frequently used methods.

Table 5.7 Perceptions of Administrators in Polk County Regarding Percent of Time Impersonal, Personal, and Group Methods of Coordination are Used (N=13)

Methods of Coordination	Mean	SD
Impersonal Methods (legally binding laws, rules; written interagency agreements; unwritten interagency agreements)	.50	.22
Personal Methods (administrators or staff acting as coordinator; informal communication	.32	.24
Group Methods (standing committees; ad hoc committees)	.18	.15
Total Administrative Coordination Score [a]	1.59	.11

[a] Total Administrative Coordination Score is a summative weighted score that represents total administrative coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by adding the percentages assigned to the three methods of coordination which have been weighted according to the amount of feedback they provide: (Impersonal * 1) + (Personal * 1.5) + (Group * 3.0). The overall score is the average of the respondents' weighted scores.

As a way of summarizing these data we computed a Total Administrative Coordination Score. Based on the theory described above—that increasing amounts of feedback produce increasing amounts of coordination—we weighted the scores for each type of coordination method so that group methods received the most weight, followed by personal methods and then impersonal methods. This means of assessing the amount of coordination within the Polk system produced a score of 1.59 with a standard deviation of .11. As we see when we compare this score with the other counties in this study, Polk County exhibited a fairly high level of administrative coordination.

Today many believe that family and child services should be accessible, available, high in quality, well coordinated, integrated, and standardized in terms of eligibility requirements and operating procedures. They should also have the capacity to continue to improve. In addition, children and adolescents with mental health problems should be identified early, and services should be family-centered and community-based, should be individualized and provide for the least restrictive treatment, and should encourage family participation and the child's smooth transition to adulthood.

We asked both administrators and staff how they would measure their system against these standards. Because we were interested in trying to assess the impact of the CASSP grants in moving the system toward these goals, we asked respondents the degree to which these characteristics exist today and the degree to which they existed three years ago, and then we calculated the difference. The range of differences was broken down into descriptive categories.

Staff Responses. Staff responses are shown in Table 5.8. The most frequent responses were Some Improvement (50%) and Little Improvement (45%).

Administrative Responses. The results from administrative respondents (N=13) are shown in Table 5.9. The most frequently given responses of administrators were Some Improvement (37%) and Little Improvement (30%).

Table 5.8 Perceptions of Staff Members in Polk County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=93)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	6 %	38 %	47 %	7 %
Available	0	6	49	33	11
High in Quality	0	6	47	36	11
Well Coordinated	1	4	50	38	7
Integrated	0	4	58	31	6
Standardized	0	5	50	13	13
Capable of Further Improvement	1	7	72	15	3
In regard to the following core values and principles:					
Early Identification	0	3	41	47	7
Family-Centered	0	0	44	29	26
Community-Based	1	4	58	31	6
Individualized Service	0	4	41	41	13
Least Restrictive	0	4	51	35	10
Family Participation	0	4	51	33	10
Smooth Transition to Adulthood	0	1	60	31	7
Percent of Responses in Each Category	0 %	3 %	45 %	50 %	9 %

Note: Percentages may not sum to 100, due to rounding.

Table 5.9 Perceptions of Administrators in Polk County Regarding Extent of Improvement in the SED Service Delivery System During Past Three Years (N=13)

	Extent of Change During Past Three Years. Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	10 %	20 %	20 %	30 %	20 %
Available	11	0	56	22	0
High in Quality	0	0	30	60	0
Well Coordinated	0	10	20	50	20
Integrated	0	20	20	40	20
Standardized	0	0	67	33	0
Capable of Further Improvement	10	40	30	20	0
In regard to the following core values and principles:					
Early Identification	0	0	30	50	20
Family-Centered	0	0	30	70	0
Community-Based	0	10	30	60	0
Individualized Service	0	0	50	50	0
Least Restrictive	0	10	30	50	10
Family Participation	0	10	30	40	20
Smooth Transition to Adulthood	50	50	0	0	0
Percent of Responses in Each Category	3 %	9 %	30 %	37 %	6 %

Note: Percentages may not sum to 100, due to rounding.

2. Youth shelters were referred to as "holding pens" with inadequate treatment programs and staff. Their use means discontinuity of education and environment for the child, and makes transition from hospitalization to long term care a difficult coordinating problem for the system.

3. Residential treatment was perceived as being scarce, very expensive, or totally lacking for key critical problems. Cited often as being needed were treatment programs for:
   - young (5 to 12) aggressive and violent boys (may be fire setters, sexually abusive)
   - aggressive and violent girls
   - dual diagnosis (MR and SED, SED and substance abuse, etc.)
   - conduct disorders needing behavior modification

4. After care follow-up was often cited as inadequate and, if not the cause of further problems, certainly as not contributing to stabilization for the child within the family or foster care placement. The lack of linkage from residential facility to family/foster family and school was seen as a problem that exacerbated already serious problems.

There were many suggestions aimed at reducing the number of children experiencing the revolving door. Each of the situations cited above as contributing to the problems, if reversed, was seen as a 'solution' to the problem. Thus, Title XIX and private health insurers should cover longer duration of treatment, shelters should not be used for "holding" but only for runaways, residential treatment should become more specialized and targeted at specific types of children such at those with dual diagnosis, and in-home after care should be expanded. In addition to these suggestions, there were two that we heard with some frequency:

1. Increased availability of sub-acute treatment—e.g., day treatment and needs-based foster care—would perhaps reduce the incidence of revolving kids; and

2. Flexible programs for sub-acute treatment—that allow periodic response to acute phases without having to transfer the child for acute hospitalization—would also eliminate some of the bouncing from program to program.

In summary, there were several visionaries who articulated this goal for the Polk County: that there be an inter-agency system with centralized intake, individualized assessment, and managed care so that all children could receive the most appropriate treatment possible.

VI. Case Study of SED Service System in Linn County

Linn County
SED Service System

Linn County is the second most populous county in the state of Iowa. It is located in the central tier of counties in the most eastern quadrant of the state, just north of Interstate 80 (which bisects the state). It is an urban county with a 1990 census population of 169,775, a gain of 1,000 over the 1980 figure. The metropolitan area of Cedar Rapids, which lies on the Cedar River, is known for its rich cultural and civic life.

Strengths of the Linn County System

Mental health services have been a focus of public attention for many years in Linn County. The Cedar Rapids community in general, and service providers in particular, hold the provision of services to children, adolescents, and their families as a high priority. Administrators in Linn County agree that theirs is a county rich in tertiary child welfare and mental health resources and that, despite direct funding shortages, a wide variety of services has been maintained (although they are fragmented and uncoordinated). On an average, administrators rated the quality of services in Linn County as good.

The SED Service System in Linn County has all ten of the core services available; for most, there is a choice among providers (see Table 6.2). There are currently three day treatment programs and several child psychiatrists in Linn County, with additional resources close by in Iowa City at the University of Iowa Child Psychiatry Department. In addition, the county has the reputation of being the foster care and residential treatment center of Iowa. Per capita, there are more foster/residential beds than in any other county in Iowa. A progressive juvenile court district contributes high standards of accountability and commitment to the welfare of children. Judge Honzell recently volunteered his judicial district to be the family court pilot for the state.

For many years the Abbe Mental Health Center has been the central source of comprehensive outpatient mental health services for children, youth, and families in the county. Beginning in summer 1991, the Mental Health Center will add a full-time child psychiatrist to its two part-time child psychiatrists, and residents from the child psychiatry department at the University of Iowa will be available to assist with the caseload. In addition, Linn County has two diversified family service organizations, as well as numerous smaller agencies. that provide counseling services and chemical dependency treatment.

There are several groups of service providers who have made attempts at coordination and collaboration, and those efforts have been moderately successful. Coordinating committees are predominantly ad hoc in nature and deal with time-limited, specific issues. There are some, however, that provide opportunities for on-going collaborative efforts among the participants:

- St. Luke's Child Protection Center sponsors a multidisciplinary committee for the purpose of case review and planning in cases of child abuse and child sexual abuse.

- The Adolescent Services Task Force has been meeting for two years to decide on a plan for integrating all of the stakeholders in the child welfare system, including the schools. As a result of this effort, Linn County is joining Polk and Scott in the state's decategorization project.

Table 6.2 Core and Support Mental Health Services in Linn County

CASSP Core Mental Health Services	Provider Agency	Monthly Average Caseload
Education and Prevention	Abbe Center—consultation & education	DNA
Nonresidential Treatment		
• Diagnostic Services	Abbe Center	150
	Mercy Child Guidance	DNA
	St. Luke's Hospital (6-12)	15
	St. Luke's Hospital (13-18)	32
• Outpatient Treatment	Abbe Center	250
	Mercy Child Guidance (Group Therapy)	13
	Mercy Child Guidance (Family Counseling)	DNA
	St. Luke's Hospital	100
• Day Treatment	St. Luke's Hospital	5
	Tanager Place	6
	Child Protection Center	19
• Crisis Intervention	Families, Inc.	8
• Home-Based Treatment	Families (Home-Based)	180
	Families (Family Preservation)	8
Residential		
• Therapeutic Group Homes	Four Oaks	22
• Therapeutic Foster Care	Lutheran Social Service	40
	Tanager Place	28
	Four Oaks	42
• Residential Treatment	Four Oaks	44
	Four Oaks (John McDonald)	20
	Four Oaks (STOP)	30
	Tanager Place	30
	Tanager Place (sexual abuse)	6
• Inpatient Hospitalization	St. Luke's Hospital	64
• **Case Management**	Mercy Child Guidance (with schools)	DNA
	Juvenile Court Services	DNA
	SUB TOTAL	1,112

Essential Support Services	Provider Agency	Monthly Average Caseload
Social Services		
Child Protection Assessment	Department of Human Services	DNA
	Child Protection Center, St. Luke's	57
Counseling	Alternative Services to Youth	35
	Family Service Agency	DNA
	Foundation II	20
	Four Oaks	42
	Tanager Place	110
Regular Foster Care	Lutheran Social Service	17
Regular Group Homes/Shelter	Alternative Services to Youth	27
	Foundation II (11-17)	13
Educational Services		
Assessment	Grant Wood AEA	DNA
Counseling	Grant Wood AEA	DNA
Chemical Dependency Treatment		
Outpatient	Foundation II	10
	Sedlacek Treatment Center	24
Inpatient	Area Substance Abuse Council	12
	Sedlacek Treatment Center	24
Halfway House	Sedlacek Treatment Center	12
Other Services		
Teenage Parenting	Four Oaks	9
Youth Employment	Alternative Services to Youth	20
	GRAND TOTAL	1,544

• Core Services NA = Not Available DNA = Data Not Available

Structure of the System. Data on intra-system referrals were obtained from 13 of the 16 agencies in the study, and therefore only those 13 agencies are included in the referral matrix in Table 6.3 These 13 agencies reported making a total of 255.5 referrals within the system each month. [It must be noted that these referrals are also to some extent duplicative, in that an individual client may be referred more than once each month. We do not know from this data how many individual children, on the average, received a service referral.] Table 6.3 shows the volume of referrals which each of the 13 organizations in the system reported making to the other 12 organizations.

Table 6.3 Linn County Client Referral Matrix (average number of referrals per month)

	Receivers —>													
Senders ↓	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
1. DHS	—			5	8	1	30	28	1	3	8	22	8	114
2. JCS		—		3	5		6	10		2		8	3	37
3. AEA			—		1	10	6	1	0.5	0.5				19
4. Abbe				—	0.5		5		2					7.5
5. St. L	18	18			—		2						1.5	39.5
6. Mercy						—								0
7. TAN				3	1.5		—							4.5
8. FAM			5	1		1		—						7
9. FSA									—					0
10. FOUN	1				2			1		—				4
11. LSS											—			0
12. ALTer				3	1							—		4
13. FO			10	6	1							2	—	19
Total	19	18	15	21	20	12	49	40	3.5	5.5	8	32	12.5	255.5

In a system of organizations that is serving the same client population, it is often necessary, because clients have multiple problems, to refer clients to other organizations for services. There are, then, potentially two linkages between each pair of agencies: one going one direction and one going the other direction. Each cell in the matrix represents a "channel" by which a client is referred from one organization to another. In Linn County, with 13 organizations in the service system, it is possible to have 156 client referral channels. The data indicate that there are 44 one-way referral channels in use, and therefore that 28% of the potential channels are being used.

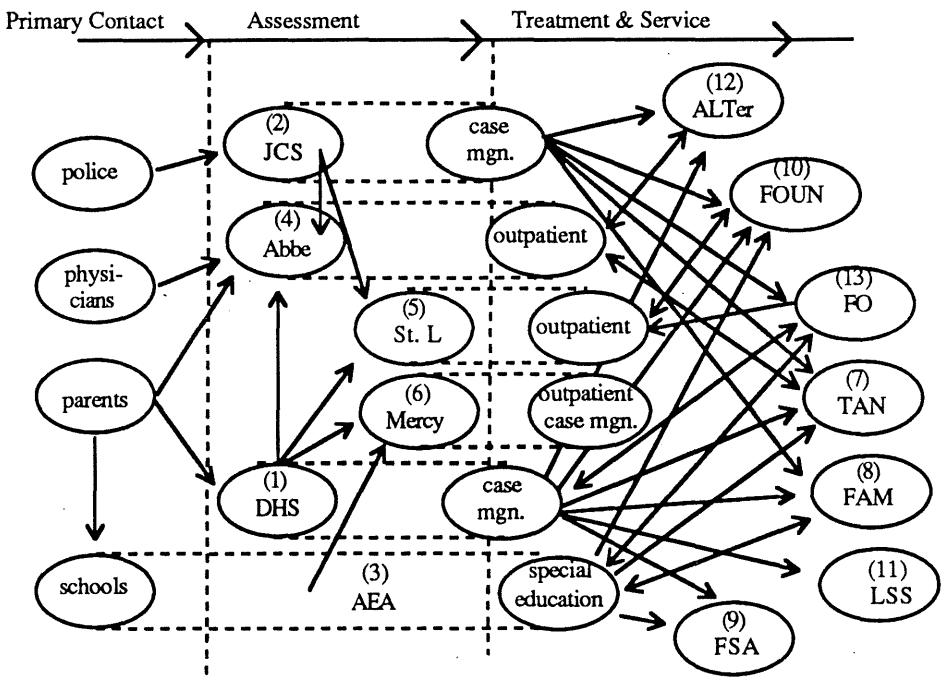
Combining this information concerning the number of agencies, their services, and their referral patterns produces Figure 6.1, which shows the structure of the Linn County system in graphic form. This diagraph is a model of the real world, simplified to make it easily understood, but representative of the structure of the Linn County delivery system.

On the basis of the Referral Matrix and the Diagraph, it appears that there are two distinct overlapping clusters of agencies serving SED children in Linn County.

Cluster #1: Juvenile Court Services, Abbe Center, St. Luke's, Tanager, Families, and Alternative Services. This cluster of agencies serves adolescents and consequently has high rates of referral interaction.

Cluster #2: Department of Human Services, Abbe Center, St. Luke's, Families, Lutheran Social Service, and Four Oaks. This cluster of agencies serves younger children.

Figure 6.1 Linn County SED Service Delivery System



Centrality is an important structural dimension of interagency systems, because it is related to the ease with which people can communicate with each other and coordinate their work. The more a system has a dominant central core agency, the more likely it is that the system will run smoothly.

The Linn County SED System has a centrality index of .28, which means it is moderately centralized with two organizations playing a central role—DHS and Juvenile Court Services. The next most central agencies are St. Luke's, Tanager, and AEA. System improvement efforts in Linn County cannot be successful without the involvement of these organizations.

Orientation to Clients

In addition to the size and structure of an interagency system, the orientation of workers to their clients has an important influence on the way that the system functions. Below, we look at the Scope of Assessment and the Scope of Service, which serve as measures of the breadth of assessment and of service delivery.

Scope of Assessment. As knowledge has grown, our perceptions of human behavior have become more complex. The increase in knowledge has also meant that many more clients are diagnosed as having multiple problems and needing multiple services. This phenomenon is also producing more variation in the way that different human services assess children and prepare service plans. Some professionals use many categories when doing an assessment, while others take a narrow view of their clients' problems.

In this study we were interested in determining how broadly workers in Iowa's SED service systems viewed their clients. We therefore listed the four major categories of internal

biological functioning (communication, intelligence, emotions, and physiology) and two categories of external functioning (social and the concrete environment). We asked the workers in Linn County to estimate the percentage of their SED clients that exhibited problems in each of these six categories. The results are shown in Table 6.4.

Table 6.4 Perceptions of Staff Members in Linn County Regarding Percent of their SED Clients that Exhibit Problems in Each of Six Assessment Categories (N=62)

Problem	Mean	SD
Communication Dysfunction	.41	.34
Intellectual Impairment	.43	.31
Emotional Dysfunction	.74	.30
Physiological Impairment	.17	.26
Environmental Deficit	.47	.36
Social Dysfunction	.69	.34
Scope of Assessment Index [a]	.49	.22

[a] The Scope of Assessment Index can range from 0 to 1.0 and represents the degree to which staff use a broad scope of assessment. It is computed for each respondent by adding the scores assigned to each of the six diagnostic categories and dividing by six. The overall Index is the average of the respondents' scores.

As is to be expected in mental health service delivery systems, the problems exhibited by the most clients, as perceived by the workers in the system, were emotional dysfunction (74%) followed by social dysfunction (69%), environmental deficit (47%), intellectual impairment (43%), communication dysfunction (41%), and physiological impairment (17%).

As a means of summarizing these data, we computed a Scope of Assessment Index. A worker who viewed every single one of his/her clients as having problems falling into all six categories would have the broadest possible orientation and would be assigned a score of 1.0, while the worker who assessed her/his clients as exhibiting only one type of problem would be assigned a score of .16. In Linn County, the average scope of assessment score was .49, and the standard deviation was .22 (meaning that 66% of the scores ranged from .27 to .71). In general terms, the value of this Index indicates that the Linn County SED system takes a moderately broad orientation to its clients.

Scope of Service. Another way to describe a system's orientation to clients is to ask: how comprehensive is the service plan for each client; to what degree are clients receiving multiple services? A comprehensive mental health system for children and adolescents contains many services deemed essential. The framework used for this study contains seven categories of services (mental health, social, educational, health, vocational, recreational, and operational). Within each category there are multiple services, for a total of 31 services.

Staff members were asked for their perceptions regarding the percentage of the SED clients that received each of these 31 services. The results are shown in Table 6.5, which shows that the service utilized by SED children most frequently was outpatient treatment, with 65% of the children receiving this service, followed by screening & assessment (56%), assessment & planning (50%), case management (44%), financial assistance (also 44%), and inpaitent hospitalization (40%). These were the services that were thought to be utilized by at least one-third of the SED children.

As a means of summarizing these data, we computed a Scope of Service Index. The questionnaire of a worker who viewed every single one of his/her clients as receiving all 31 services would indicate that the system has the broadest posssible orientation, and it would be assigned a score of 1.0; the questionnaire of a worker who viewed his/her clients as receiving only one service would be assigned a score of .03. In Linn County, the average Scope of Service score was .27, and the standard deviation was .11 (meaning that 66% of the scores ranged from .16 to .38). In general terms, the value of this Index indicates that SED children in Linn County are viewed by the staff members as having narrow service plans.

Table 6.5 Perceptions of Staff Members in Linn County Concerning the Percent of their SED Clients that Receive Each of 31 Services (N=62)

		Mean	S.D.
Mental Health Services	Outpatient Treatment	.49	.37
	Home-Based Services	.46	.40
	Day Treatment	.10	.25
	Therapeutic Foster Care	.26	.32
	Therapeutic Group Care	.25	.35
	Inpatient Hospitalization	.11	.17
Social Services	Protective Services	.53	.40
	Financial Assistance	.60	.33
	Respite Care	.09	.19
	Shelter Services	.15	.21
	Foster Care	.28	.31
	Adoption	.08	.17
Educational Services	Assessment & Planning	.55	.37
	Resource Rooms	.35	.28
	Self-Contained Special Ed.	.29	.29
	Home-Bound Instruction	.02	.11
	Residential Schools	.18	.26
	Alternative Programs	.13	.22
Health Services	Screening & Assessment	.54	.41
	Primary Care	.44	.43
	Acute Care	.13	.28
	Long-Term Care	.07	.21
Vocational Services	Vocational Assessment	.14	.26
	Vocational Skills Training	.10	.17
	Work Experiences	.15	.22
	Shelter Employment	.03	.08
Recreational Services	After School Programs	.18	.29
	Summer Camps	.24	.30
Operational Services	Case Management	.64	.44
	Transportation	.36	.38
	Advocacy	.44	.43
Scope of Service Index [a]		.27	.11

[a] The Scope of Service Index is a summative score that represents the degree to which clients receive multiple services. It can range from 0 to 1.0 and it represents the respondent's perception of service implementation. It is computed for each respondent by adding the scores assigned to each of the 31 service categories and dividing by 31. The overall index is the average of the respondents' scores.

Case Coordination and Administrative Coordination

One of the most important aspects of interagency service delivery systems, one that attracts the most attention, is coordination. Although this term is used with great frequency, there is not always agreemeent about its meaning. As used in this study, interagency coordination refers to methods that internally regulate a system. When interorganizational coordination exists, many aspects of the work activity are so governed that the effort of each individual organization is directed toward common objectives and goals. When coordination does not exist, organizations have few restrictions and are free to choose their own objectives and methods, which may be consistent with or conflict with those of other organizations.

Case Coordination. Staff must often work closely with staff in other agencies. The need for case coordination is profoundly affected by the way that clients flow through a system. There are three basic client flow patterns. In the Sequential Method, organizations make referrals to and accept referrals from other agencies in the system (clients flow from one organization to another but are served by only one at a time). In the Reciprocal Method, organizations make and accept referrals from more than one organization in the system (clients are served simultaneously by more than one agency). In the Team Method, organizations share the work of serving or treating clients (clients are served by agencies whose treatment staff have developed together one treatment plan and who constitute one intervention team).

If the pattern is sequential—as in a system where adolescents are referred from home to hospital, to group facility, and home again—there is little necessity for case coordination across organizational boundaries, because patients are treated by one organization at a time. At the other extreme is the team pattern, as in a system that serves multi-problem families, where there is a compelling necessity for case coordination because the child has to be treated simultaneously by workers from numerous agencies.

We asked staff members in Linn County what percentage of their SED clients progressed through their system in each of these three patterns. Their responses are shown in Table 6.6, which shows that in Linn County the reciprocal method of case coordination is used half of the time, with the sequential and team methods each used about one-quarter of the time.

As a way of summarizing these data, we computed a Total Case Coordination Score. Based on the theory described above—that simultaneous services from multiple organizations require high levels of case coordination—we weighted the scores for each type of coordination method so that team methods received the most weight, followed by reciprocal methods and then sequential methods. This means of assessing the amount of case coordination within the Linn system produced a score of 1.73, with a standard deviation of .52. As we see when we compare this score with the other counties in this study, Linn County exhibited a quite high level of case coordination.

Table 6.6 Perceptions of Staff Members in Linn County Regarding Percentage of their SED Clients that Flow Through the Linn County Service Delivery System in a Sequential, Reciprocal, or Team Pattern (N=63)

Case Coordination Pattern	Mean	SD
Sequential	.29	.30
Reciprocal	.50	.31
Team	.23	.26
Total Case Coordination Score[a]	1.73	.52

[a] Total Case Coordination Score is a summative weighted score that represents the total case coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by weighting the percentage assigned to each type of case coordination method (Sequential* 1) + (Reciprocal * 1.5) + (Team * 3.0) and then summing the products. The overall score is the average of the respondents' weighted scores.

Administrative Coordination. Staff members are not the only persons in service delivery who are asked to mesh their work with persons in other agencies. Administrators will coordinate their services with others if they perceive a need for compatibility between programs. For example, if my agency provides service X, and if, in order for my service to be effective, my client must also be receiving service Y (which is provided by another agency), then I will work to insure that my client can get service Y and that it is compatible (offered when, where, and how my client needs it). This means that as an administrator I will monitor various incompatibilities that occur when programs reside in different organizations with different perspectives about how clients should be treated. I will seek to feed back into the system information about incompatibilities when they occur, and I will do this by sharing information and making decisions with administrators of other agencies in the system. As interagency systems move toward an increasing emphasis on effective services to multi-problem clients, the greater is the need for information feedback via group planning and decision making structures as opposed to impersonal rules and plans.

Methods of administrative coordination can be regarded, therefore, as varying with respect to the amount of information feedback required to implement them. Three methods, which utilize increasing amounts of feedback, were used as indicators of the amount of coordination. Administrative coordination by Impersonal Programming includes the utlilization of plans, rules, regulations, agreements, contracts, or anything which removes discretion from individual workers and requires little information feedback. Administrative coordination by Personal Feedback includes the use of person-to-person contact between administrators, or the designation of an

individual to act as coordinator in order to expedite planning and decision-making across organizational boundaries. Administrative coordination by Group Methods means feedback which is obtained through face-to-face communication by two or more individuals who plan and make decision by consensus.

Going from impersonal, to personal, to group methods means that we are achieving higher levels of coordination. In fact, the weights we assign to the coordination scores are based on the assumption that group methods achieve three times more coordination than do impersonal methods.

Table 6.7 shows how the administrators of SED programs in Linn County perceive the use of impersonal, personal, and group methods of coordination among the agencies in their system. Personal methods are thought to be the dominant method by which administrators coordinate their programs in Linn County. In fact, more than half of the time (60%) personal methods are used. Impersonal methods are used quite frequently (36%), and group methods are used much less often (9%) .

Table 6.7 Perceptions of Administrators in Linn County Regarding Percent of Time Impersonal, Personal, or Group Methods of Coordination are Used (N=6)

Methods of Administrative Coordination	Mean	SD
Impersonal Methods (legally binding laws, rules; written interagency agreements; unwritten interagency agreements)	.36	.27
Personal Methods (administrators or staff acting as coordinator; informal communication)	.60	.26
Group Methods (standing committees; ad hoc committees)	.09	.07
Total Administrative Coordination Score [a]	1.45	.20

[a] Total Administrative Coordination Score is a summative weighted score that represents total administrative coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by weighting the percentage assigned to each type of administrative coordination method (Impersonal * 1) + (Personal * 1.5) + (Group * 3.0) and then summing the products. The overall index is the average of the respondents' weighted scores.

As a way of summarizing these data, we computed a Total Administrative Coordination Score. Based on the theory described above—that increasing amounts of feedback produce increasing amounts of coordination—we weighted the scores for each type of coordination method so that group methods received the most weight, followed by personal methods and then

impersonal methods. This means of assessing the amount of coordination within the Linn County system produced a score of 1.45, with a standard deviation of .20. As we will see when we compare this score with the other counties in this study, Linn County exhibits a quite low level of administrative coordination.

Evaluation of the Linn County System

Today many believe that family and child services should be accessible, available, high in quality, well coordinated, integrated, and standardized in terms of eligibility requirements and operating procedures. They should also have the capacity to continue to improve. In addition, children and adolescents with mental health problems should be identified early, and services should be family-centered and community-based, should be individualized and provide for the least restrictive treatment, and should encourage family participation and the child's smooth transition to adulthood.

We asked both administrators and staff how they would measure their system against these standards. We asked respondents the degree to which these characteristics exist today and the degree to which they existed three years ago, and then we calculated the difference. The range of differences was then broken down into descriptive categories.

Staff Responses. Staff responses are shown in Table 6.8 The most frequent responses were Some Improvement (39%) and Little Improvement (37%).

Administrative Responses. The results from administrative respondents are shown in Table 6.9 The most frequently given response of administrators was Little Improvement (59%), followed by Some Improvement (26%).

Table 6.8 Perceptions of Staff Members in Linn County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=64)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	2 %	7 %	24 %	51 %	13 %
Available	2	7	26	50	11
High in Quality	0	0	0	0	0
Well Coordinated	0	4	36	47	13
Integrated	2	8	43	34	9
Standardized	2	0	52	43	4
Capable of Further Improvement	7	6	57	22	7
In regard to the following core values and principles:					
Early Identification	2	7	25	51	15
Family-Centered	0	5	31	49	15
Community-Based	2	5	44	42	7
Individualized Service	0	5	40	47	7
Least Restrictive	0	5	35	45	12
Family Participation	0	2	44	33	20
Smooth Transition to Adulthood	0	4	60	27	9
Average Percent of Responses in Each Category	1 %	5 %	37 %	39 %	10 %

Note: Percentages may not sum to 100, due to rounding.

Table 6.9 Perceptions by Administrators in Linn County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=9)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	44 %	33 %	11 %	11 %
Available	0	33	44	22	0
High in Quality	0	0	44	56	0
Well Coordinated	0	11	44	33	0
Integrated	0	0	56	22	22
Standardized	0	0	56	33	0
Capable of Further Improvement	0	22	33	33	11
In regard to the following core values and principles:					
Early Identification	0	0	44	44	11
Family-Centered	0	0	67	22	11
Community-Based	0	0	67	11	22
Individualized Service	0	0	89	11	0
Least Restrictive	0	0	56	33	11
Family Participation	0	0	67	33	0
Smooth Transition to Adulthood	0	0	0	0	0
Average Percent of Responses in Each Category	0 %	8 %	59 %	26 %	7 %

Note: Percentages may not sum to 100, due to rounding.

Conclusions

This case provides information about the nature of mental health services in the state's second largest county. It has described the range of services for children and the structure of the service system, and it has provided some data about the linkages that exists between agencies.

Linn County can be described as a comprehensive system. It has a broad range of core and support services—all necessary core services are available as well as many social and concrete services. Linn has an unusually large number of inpatient and residential beds, yet it still has a large number of children placed outside the county that professionals think could be treated in Linn if appropriate care were available.

The Linn County service delivery system is characterized by its large size and by the fact that there did not appear to be the density of linkages that we would expect in such a county. There were relatively few referral channels that were recognized by persons working in the system. In addition, administrators reported a low level of coordination among themselves; in fact, the administrative coordination index was the lowest of the six counties studied. In contrast, there appeared to be a moderate level of case coordination among staff in the agencies studied.

These two observations concerning out-of-county placements and the lack of cooperation among agencies at the administrative level were repeated in every interview we conducted in Linn County. Many respondents linked the two observations, saying that less competition and more cooperation among organizations would, in the end, result in more individualized treatment for children and, therefore, prevent the need for the large numbers of children in residential treatment. It is the respondents' hope that this will be the primary achievement of Decategorization in Linn County.

VII. Case Study of SED Service System in Pottawattamie County

Pottawattamie County
SED Service System

Pottawattamie County is a mixed urban and rural county located on the western border with Nebraska. The population of the county in the 1990 census was 82,628, a population loss of 5% from the 1980 census. The metropolitan area of Council Bluffs lies on the Missouri River and is part of the greater bi-state metropolitan area of Omaha.

Strengths of the Pottawattamie County System

Pottawattamie County has a history of mental health agencies working together. In 1978 it was the first in the state to establish a rural family therapy model, a joint venture between the Department of Human Services and private family service agencies that eventually covered 14 counties. Pottawattamie was also the first area in the state to offer family preservation and family reunification services on a direct delivery basis. These programs, in addition to the Southwest Iowa Coalition's Friends of New Parents Program, have been cited as contributing to the reduced number of abuse investigations in the county in the last several years. There has also been a long history of a good working relationship between DHS and the Juvenile Court system. Their cooperative efforts have resulted in more efficient use of their juvenile justice dollars.

There are a number of collaborative interagency efforts that have existed for many years. Some of them are:

- The Human Services Advisory Committee (HSAC) was formed in 1977 to foster better working relationships among agencies. Founding members were the Mental Health Center (now Mercy Center), DHS, Juvenile Court, and Children's Christian Home (now Children's Square). They meet monthly to share information. They have various subcommittees to deal with specific issues such as emergency services, legislation, and community education.

- The Southwest Iowa Coalition for Families and Children focuses on abuse prevention by promoting child abuse prevention programs.

- The Mental Health and Mental Retardation and Developmental Disabilities (MHMRDD) Advisory Committee focuses on planning in the county for the chronically disabled. There is no specific child component, however.

- The AEA has a number of cooperative relationships with agencies in the community that provide an educational component. There is an exchange of services in the areas of education, case management, family planning, evaluation, and staff development.

Identified Problems in the Pottawattamie County System

In the years 1964 to 1979, the Mental Health Center of Pottawattamie County (now Mercy Center after being incorporated into Mercy Hospital) had a child guidance component staffed by two child psychiatrists and two counseling staff. Due to financial difficulties, that service was eliminated in 1980, and services to children were subsumed under general mental health services. Since then, Pottawattamie County has provided fewer mental health services that focus specifically

on children and adolescents. This problem is now resolved to some degree with the addition, in July 1991, of a child psychiatrist on the staff of Mercy Hospital and the Mercy Center. In a global assessment of services to SED children and adolescents in Pottawattamie County, however, administrators still rank the availability of comprehensive services in the county as poor.

Pottawattamie County administrators reported that they are seeing more severely disturbed children coming into the system, children needing a whole range of services, many of which they have been unable to provide up to this time. Because of gaps in services, Pottawattamie children are often referred to Omaha-based programs. Omaha services, however, are becoming more difficult to access because of differences in regulations between Iowa Medicaid and Nebraska Medicaid. There are presently negotiations under way, and possibly litigation, between the State of Iowa and some of the hospitals in Omaha. This remains perhaps the biggest problem of the Pottawattamie system.

In interviews with administrators in the county, three specific service gaps were identified:

• Day treatment was identified as the most critical. The only options for SED children and adolescents who cannot remain in school is residential placement provided by Mercy Hospital and Children's Square, or out-of-home placement which often must be in facilities out of state. The Iowa School for the Deaf provides services to seriously emotionally disturbed deaf children.

• More PMIC beds are needed so that children and adolescents can make a more gradual transition from hospitalization to home or foster care. The county currently has no moderately intensive treatment program.

• Also recognized was the need for closer cooperation between the schools and mental health programs and more communication between teachers and line staff dealing with specific children. The competition between Mercy Hospital and Jennie Edmundson Hospital, added to their competition with Omaha-based hospitals, also appears to be one of the areas where there is a limit to cooperation.

Finally, many respondents cited the need to make it more difficult for children to be hospitalized. The solution to this problem will require that outpatient services be funded by insurance companies and that families be involved in treatment and education decisions.

The history of trusting relationships in this county has made it a logical candidate for participation in Iowa's decategorization project. The Decat Project is addressing the problems in the mental health service system for children. The major dilemma that Decat planning will have to face is competition between hospitals in the Omaha area and the issue of duplication of services. There are some in the county that wish to have a full range of services. On the other hand, the Human Services Advisory Council, made up of agency directors and staff from both sides of the river, has emphasized that there should not be duplication of services; rather, resources should be used to expand existing services and plug existing gaps. These are encouraging signs that there is renewed focus on the adequacy of services to SED children and adolescents.

Characteristics of the Pottawattamie County System

The interagency service system for SED children in Pottawattamie County is described below in some detail and is summarized by the profile shown in Table 7.1.

Table 7.1 Profile of the Pottawattamie County Service Delivery System

Total Number of Children [1]		29,644
Ages 0 to 10	13,577	
11 to 19	16,067	
Children Needing Mental Health Services [2]		3,498
Seriously Emotionally Disturbed (SED) Children[2]		1,749
Children Placed Outside County Who Should Be Served In County[3]		50
Number of Agencies		11
Number of SED Programs[4]		42
Average Size of Caseload Per Program		
Monthly Minimum		3
Monthly Maximum		200
Monthly Average		39
Average Number of Referrals Per Agency		
Monthly Minimum		3
Monthly Maximum		99
Monthly Average		28

[1] Source: 1980 U.S. Population Census.

[2] One accepted estimate of the need for mental health services among children is approximately 11.8% of the total child population; about half of the total children needing mental health services are estimated to be seriously emotionally disturbed (SED) (Gilmore, Chang, & Coron, 1984).

[3] Point-in-Time DHS/JCS Study (5-18-90).

[4] A program is a discrete service offered by the staff of an organization.

On the basis of 1980 Census data, it is estimated that there are 3,498 children in Pottawattamie County from birth to age 19 who need some type of mental health services, while 1,749 can be classified as seriously emotionally disturbed, with serious and/or chronic mental health problems.

Comprehensiveness and Accessibility of Services. Eleven organizations that provide direct mental health services to Pottawattamie County children and youth are included in this study.

1. Department of Human Services (DHS)
2. Juvenile Court Services (JCS)
3. Loess Hills Area Education Agency (AEA)
4. Mercy Mental Health Center (MHC)
5. Mercy Hospital, McDermott (McDermott)
6. Mercy Chemical Dependency Services (Mercy CD)

7. Jennie Edmundson Memorial Hospital (Jennie Ed)
8 Family Service Addiction Services (FSAS)
9. Children's Square USA (C Sq)
10. Family Group (Fam G)
11. Family Networks, Inc. (Fam N)

This list includes the central organizations which provide core services to SED children, but it is not an exhaustive list of organizations in the Council Bluffs area which provide services to SED clients in Pottawattamie County. The necessity to limit our investigation should not be construed as a reflection on the role of other providers of services in the system. The services provided by the 11 agencies, with the average monthly caseload for each service, are listed in Table 7.2.

Table 7.2 Core and Support Mental Health Services in Pottawattamie County

CASSP Core Mental Health Services	Provider Agency	Monthly Average Caseload
Education and Prevention	Juvenile Court Services	DNA
Nonresidential Treatment		
• Diagnostic Services	Mercy MHC	DNA
• Outpatient Treatment	Mercy MHC (Family Therapy)	DNA
	Mercy MHC (Play Therapy)	DNA
	The Family Group (Play Therapy)	10
	Family Networks (Family Therapy)	10
• Day Treatment	Children's Square USA	45
• Crisis Intervention	NA	
• Home-Based Treatment	Department of Human Services	16
	Family Group	50
Residential		
• Therapeutic Group Homes	NA	
• Therapeutic Foster Care	Children's Square USA	40
• Residential Treatment	Children's Square USA	40
• Inpatient Hospitalization	Mercy Hospital, McDermott	25
	Jennie Edmundson Hospital (Ind. Therapy)	16
	Jennie Edmundson Hospital (Group & other)	16
• **Case Management**	Department of Human Services	110
	SUB TOTAL	378

Essential Support Services	Provider Agency	Monthly Average Caseload
Social Services		
Child Protection Assessment	Department of Human Services	DNA
Counseling	DHS (Family Centered)	45
	Children's Square USA (Family Centered)	50
Regular Foster Care	Department of Human Services	200
Regular Group Homes/Shelter	NA	
Shelter Care	Children's Square USA	30
Educational Services		
Assessment	Loess Hills AEA	DNA
Special Education	Loess Hills AEA Classrooms (2.4)	104
	Loess Hills AEA Classrooms (3.6)	78
	Loess Hills AEA Hospital	10
	Loess Hills AEA Shelter	37
	Children's Square USA	30
Chemical Dependency Treatment		
Outpatient	Family Service Addiction Services	12
Inpatient	Mercy Chemical Depen. (Acute)	8
	Mercy Chemical Depen. (Extended Residential)	21
	Mercy Chemical Depen. (Residential)	16
	Mercy Chemical Depen. (Shelter)	14
	Mercy Chemical Depen. (After Care)	10
Prevention	Family Service Addiction Services	20
Other Services		
Vocational Rehabilitation	Juvenile Court Services	24
Community Service	Juvenile Court Services	12
Diversion—Intake	Juvenile Court Services	29
Independent Living	Children's Square USA	3
Runaway	Children's Square USA	25
Spiritual Life	Children's Square USA	65
Experiential Education	Children's Square USA	65
Therapeutic Recreation	Children's Square USA	65
Career Education	Children's Square USA	65
	GRAND TOTAL	1,416

• Core Services NA = Not Available DNA = Data Not Available

The 11 organizations provide a total of 42 direct service programs to residents of Pottawattamie County. Of all the programs surveyed, the smallest average caseload was three open cases per month, while the largest was 200.

The total monthly caseload for the programs which provided data was 1,416. When compared with the estimated SED population (see Table 7.1, Seriously Emotionally Disturbed [SED] Children), the caseload represents 81% of those in need of service. [Because the total caseload of 1,416 is most probably a duplicated count, and since we know that SED children are often multi-problem and thus receive two or more services, 81% is probably an inflated estimate.] This relatively high percentage is partly due to the fact that Pottawattamie children can be referred for services in Nebraska.

Structure of the System. Data on intra-system referrals were obtained from 10 of the agencies in the study and are included in the referral matrix in Table 7.3 These agencies reported making a total of 281 referrals within the system each month. [It must be noted that these referrals are also to some extent duplicative, in that an individual client may be referred more than once each month. We do not know from this data how many individual children, on the average, received a service referral.] Table 7.3 shows the volume of referrals which each of the 10 units reported making to the other 9 units.

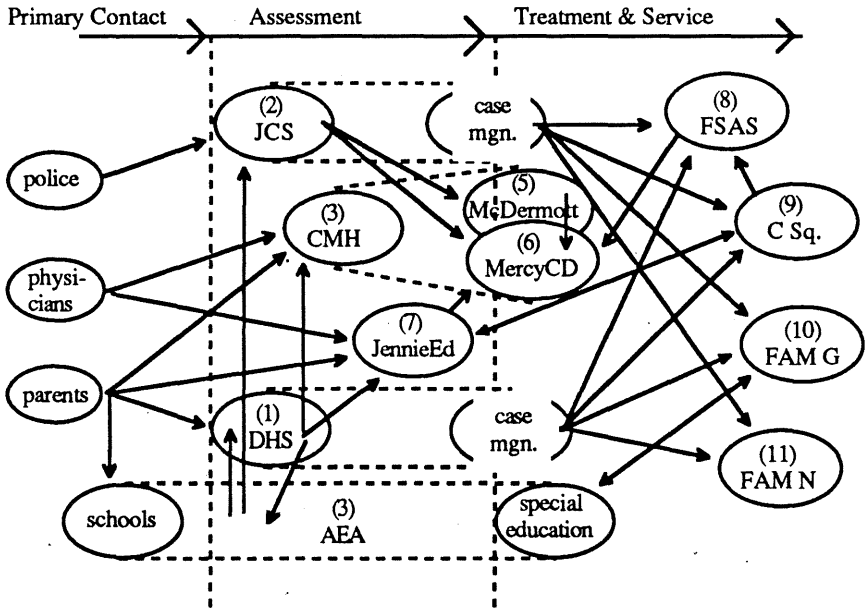
Table 7.3 Pottawattamie County Client Referral Matrix (average number of referrals per month)

					Receivers —>						
Senders	1	2	3	4	5	6	7	8	9	10	total
(1) DHS	—		5	10	11	20	4	14	6	10	80
(2) JCS		—			11	8		20		3	42
(3) AEA	8	15	—	1	35		25		12	3	99
(4) CMH	3			—							3
(5) McDerm	7				—	6					13
(6) Mercy CD	1				4	—		1	1		7
(7) Jennie Ed.	3						—				3
(8) FSAS						3		—			3
(9) C. Sq.						1	6	10	—		17
(10) Fam. G	4	4	2		2		2			—	14
	26	19	7	11	63	38	37	45	19	16	281

In a system of organizations that is serving the same client population, it is often necessary, because clients have multiple problems, to refer clients to other organizations for services. There are, then, potentially two linkages between each pair of agencies: one going one direction and one going the other direction. Each cell in the matrix represents a "channel" by which a client is referred from one organization to another. In Pottawattamie County, with 10 units in the service system, it is possible to have 90 client referral channels. The data indicate that there are 36 one-way referral channels in use, and therefore that 40% of the potential channels are being used.

Combining this information concerning the number of agencies, their services, and their referral patterns produces Figure 7.1, which shows the structure of the Pottawattamie County system in graphic form. This diagraph is a model of the real world, simplified to make it easily understood, but representative of the structure of the Pottawattamie County delivery system.

Figure 7.1 Pottawattamie County SED Service Delivery System



Based on the Referral Matrix and the Diagraph, there are two distinct and overlapping clusters of agencies serving SED children in Pottawattamie County.

Cluster #1: This is a large group of agencies that clusters around DHS and includes the Mental Health Center with its two programs, McDermott and Mercy CD, as well as the family service agencies.

Cluster#2: This is a subset of agencies clustered around Juvenile Court Services which includes McDermott, Mercy CD, and the Family Service Addiction Services.

Centrality is an important structural dimension of interagency systems, because it is related to the ease with which people can communicate with each other and coordinate their work. The more a system has a dominant central core agency, the more likely it is that the system will run smoothly.

The Service System in Pottawattamie County is moderately centralized with an index of .27, although there are quite a few organizations that play a pheriperal role in the system. The most central organization by far is the Department of Human Services, followed by the AEA and Juvenile Court Services.

Orientation to Clients

In addition to the size and structure of an interagency system, the orientation of workers to their clients has an important influence on the way that the system functions. Below, we look at the Scope of Assessment and the Scope of Service, which serve as measures of the breadth of assessment and of service delivery.

Scope of Assessment. As knowledge has grown, our perceptions of human behavior have become more complex. The increase in knowledge has also meant that many more clients are diagnosed as having multiple problems and needing multiple services. This phenomenon is also producing more variation in the way that different human services assess children and prepare service plans. Some professionals use many categories when doing an assessment, while others take a narrow view of their clients' problems.

In this study we were interested in determining how broadly workers in Iowa's SED service systems viewed their clients. We therefore listed the four major categories of internal biological functioning (communication, intelligence, emotions, and physiology) and two categories of external functioning (social and the concrete environment). We asked the workers in Pottawattamie County to estimate the percentage of their SED clients that exhibited problems in each of these six categories. The results are shown in Table 7.4.

Table 7.4 Perceptions of Staff Members in Pottawattamie County Regarding Percent of their SED Clients that Exhibit Problems in Each of Six Assessment Categories (N=80)

Problem	Mean	SD
Communication Dysfunction	.48	.33
Intellectual Impairment	.56	.28
Emotional Dysfunction	.75	.32
Physiological Impairment	.19	.22
Environmental Deficit	.60	.31
Social Dysfunction	.81	.25
Scope of Assessment Index [a]	.56	.19

[a] The Scope of Assessment Index can range from 0 to 1.0 and represents the degree to which respondents use a broad scope of assessment. It is computed for each respondent by adding the scores each respondent assigned to each of the six diagnostic categories and dividing by six. The overall Index is the average of the respondents' scores.

As is to be expected in mental health service delivery systems, the problems exhibited by the most clients, as perceived by the workers in the system, were social dysfunction (81%) followed by emotional dysfunction (75%), environmental deficit (60%), intellectual impairment (56%), communication dysfunction (48%), and physiological impairment (19%).

As a means of summarizing these data, we computed a Scope of Assessment Index. A worker who viewed every single one of his/her clients as having problems falling into all six categories would have the broadest possible orientation and would be assigned a score of 1.0, while the worker who assessed her/his clients as exhibiting only one type of problem would be assigned a score of .16. In Pottawattamie County, the average scope of assessment score was .56, and the standard deviation was .19 (meaning that 66% of the scores ranged from .37 to .75). In general terms, the value of this Index indicates that the Pottawattamie County SED system takes a broad orientation to its clients.

Scope of Service. Another way to describe a system's orientation to clients is to ask: how comprehensive is the service plan for each client; to what degree are clients receiving multiple services? A comprehensive mental health system for children and adolescents contains many services deemed essential. The framework used for this study contains seven categories of services (mental health, social, educational, health, vocational, recreational, and operational). Within each category there are multiple services, for a total of 31 services.

Staff members were asked for their perceptions regarding the percentage of the SED clients that received each of these 31 services. The results are shown in Table 7.5, which shows that the service utilized by SED children most frequently was case management, with 79% of the children receiving this service, followed by financial assistance (74%), assessment & planning (73%), screening & assessment (69%), advocacy (56%), primary care (55%), and outpatient treatment (50%). All of these services were thought to be utilized by at least one-half of the SED children.

As a means of summarizing these data, we computed a Scope of Service Index. The questionnaire of a worker who viewed every single one of his/her clients as receiving all 31 services would indicate that the system has the broadest posssible orientation, and it would be assigned a score of 1.0; the questionnaire of a worker who viewed his/her clients as receiving only one service would be assigned a score of .03. In Pottawattamie County, the average Scope of Service score was .34, and the standard deviation was .13 (meaning that 66% of the scores ranged from .21 to .47). In general terms, the value of this Index indicates that SED children in Pottawattamie County are viewed by the staff members as having somewhat limited service plans.

Case Coordination and Administrative Coordination

One of the most important aspects of interagency service delivery systems, one that attracts the most attention, is coordination. Although this term is used with great frequency, there is not always agreemeent about its meaning. As used in this study, interagency coordination refers to methods that internally regulate a system. When interorganizational coordination exists, many aspects of the work activity are so governed that the effort of each individual organization is directed toward common objectives and goals. When coordination does not exist, organizations have few restrictions and are free to choose their own objectives and methods, which may be consistent with or conflict with those of other organizations.

Table 7.5 Perceptions of Staff Members in Pottawattamie County Regarding Percent of their SED Clients that Receive Each of 31 Services (N=110)

		Mean	S.D.
Mental Health Services	Outpatient Treatment	.50	.30
	Home-Based Services	.33	.34
	Day Treatment	.17	.27
	Therapeutic Foster Care	.18	.27
	Therapeutic Group Care	.35	.37
	Inpatient Hospitalization	.20	.28
Social Services	Protective Services	.44	.34
	Financial Assistance	.74	.34
	Respite Care	.09	.20
	Shelter Services	.21	.30
	Foster Care	.32	.33
	Adoption	.04	.07
Educational Services	Assessment & Planning	.73	.37
	Resource Rooms	.33	.31
	Self-Contained Special Ed.	.31	.32
	Home-Bound Instruction	.06	.16
	Residential Schools	.23	.32
	Alternative Programs	.16	.20
Health Services	Screening & Assessment	.69	.41
	Primary Care	.55	.44
	Acute Care	.27	.39
	Long-Term Care	.23	.36
Vocational Services	Vocational Assessment	.44	.41
	Vocational Skills Training	.34	.36
	Work Experiences	.27	.32
	Shelter Employment	.03	.11
Recreational Services	After School Programs	.34	.41
	Summer Camps	.09	.23
Operational Services	Case Management	.79	.38
	Transportation	.43	.45
	Advocacy	.56	.45
Scope of Service Index [a]		.34	.13

[a] The Scope of Service Index is a summative score that represents the degree to which clients receive multiple services. It can range from 0 to 1.0 and it represents the respondent's perception of service implementation. It is computed for each respondent by adding the scores assigned to each of the 31 service categories and dividing by 31. The overall index is the average of the respondents' scores.

Case Coordination. Staff must often work closely with staff in other agencies. The need for case coordination is profoundly affected by the way that clients flow through a system. There are three basic client flow patterns. In the Sequential Method, organizations make referrals to and accept referrals from other agencies in the system (clients flow from one organization to another but are served by only one at a time). In the Reciprocal Method, organizations make and accept referrals from more than one organization in the system (clients are served simultaneously by more than one agency). In the Team Method, organizations share the work of serving or treating clients (clients are served by agencies whose treatment staff have developed together one treatment plan and who constitute one intervention team).

If the pattern is sequential—as in a system where adolescents are referred from home to hospital, to group facility, and home again—there is little necessity for case coordination across organizational boundaries, because patients are treated by one organization at a time. At the other extreme is the team pattern, as in a system that serves multi-problem families, where there is a compelling necessity for case coordination because the child has to be treated simultaneously by workers from numerous agencies.

We asked staff members in Pottawattamie County what percentage of their SED clients progressed through their system in each of these three patterns. Their responses are shown in Table 7.6.

Table 7.6 shows that in Pottawattamie County the reciprocal and team methods of case coordination are used about equally often (41% and 37%, respectively), with the sequential pattern being used about half as often (19%).

As a way of summarizing these data, we computed a Total Case Coordination Score. Based on the theory described above—that simultaneous services from multiple organizations require high levels of case coordination—we weighted the scores for each type of coordination method so that team methods received the most weight, followed by reciprocal methods and then sequential methods. This means of assessing the amount of case coordination within the Pottawattamie system produced a score of 1.92, with a standard deviation of .68. As we see when we compare this score with the other counties in this study, Pottawattamie County exhibited a very high level of case coordination.

Table 7.6 Perceptions of Staff Members in Pottawattamie County Regarding Percentage of their SED Clients that Flow Through the Pottawattamie County Service Delivery System in a Sequential, Reciprocal, or Team Pattern (N=111)

Case Coordination Pattern	Mean	SD
Sequential	.19	.30
Reciprocal	.41	.34
Team	.37	.36
Total Case Coordination Score [a]	1.92	.68

[a] Total Case Coordination Score is a summative weighted score that represents the total case coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by weighting the percentage assigned to each type of case coordination method (Sequential* 1) + (Reciprocal * 1.5) + (Team * 3.0) and then summing the products. The overall score is the average of the respondents' weighted scores.

Administrative Coordination. Staff members are not the only persons in service delivery who are asked to mesh their work with persons in other agencies. Administrators will coordinate their services with others if they perceive a need for compatibility between programs. For example, if my agency provides service X, and if, in order for my service to be effective, my client must also be receiving service Y (which is provided by another agency), then I will work to insure that my client can get service Y and that it is compatible (offered when, where, and how my client needs it). This means that as an administrator I will monitor various incompatibilities that occur when programs reside in different organizations with different perspectives about how clients should be treated. I will seek to feed back into the system information about incompatibilities when they occur, and I will do this by sharing information and making decisions with administrators of other agencies in the system. As interagency systems move toward an increasing emphasis on effective services to multi-problem clients, the greater is the need for information feedback via group planning and decision making structures as opposed to impersonal rules and plans.

Methods of administrative coordination can be regarded, therefore, as varying with respect to the amount of information feedback required to implement them. Three methods, which utilize increasing amounts of feedback, were used as indicators of the amount of coordination. Administrative coordination by Impersonal Programming includes the utlilization of plans, rules, regulations, agreements, contracts, or anything which removes discretion from individual workers and requires little information feedback. Administrative coordination by Personal Feedback includes the use of person-to-person contact between administrators, or the designation of an individual to act as coordinator in order to expedite planning and decision-making across organizational boundaries. Administrative coordination by Group Methods means feedback which

is obtained through face-to-face communication by two or more individuals who plan and make decision by consensus.

Going from impersonal, to personal, to group methods means that we are achieving higher levels of coordination. In fact, the weights we assign to the coordination scores are based on the assumption that group methods achieve three times more coordination than do impersonal methods.

Table 7.7 shows how the administrators of SED programs in Pottawattamie County perceive the use of impersonal, personal, and group methods of coordination among the agencies in their system.

Table 7.7 Perceptions of Administrators in Pottawattamie County Regarding Percent of Time Impersonal, Personal, or Group Methods of Coordination are Used (N=12)

Methods of Administrative Coordination	Mean	SD
Impersonal Methods (legally binding laws, rules; written interagency agreements; unwritten interagency agreements)	.45	.22
Personal Methods (administrators or staff acting as coordinator; informal communication)	.34	.17
Group Methods (standing committees; ad hoc committees)	.21	.16
Total Administrative Coordination Score [a]	1.59	.32

[a] Total Administrative Coordination Score is a summative weighted score that represents total administrative coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by weighting the percentage assigned to each type of administrative coordination method (Impersonal * 1) + (Personal * 1.5) + (Group * 3.0) and then summing the products. The overall index is the average of the respondents' weighted scores.

Table 7.7 shows that impersonal methods are thought to be the dominant method (45%) by which administrators coordinate their programs in Pottawattamie County. Personal methods (34%) are also used quite frequently, with group methods (21%) used less often.

As a way of summarizing these data, we computed a Total Administrative Coordination Score. Based on the theory described above—that increasing amounts of feedback produce increasing amounts of coordination—we weighted the scores for each type of coordination method so that group methods received the most weight, followed by personal methods and then impersonal methods. This means of assessing the amount of coordination within the

Pottawattamie County system produced a score of 1.59, with a standard deviation of .32. As we will see when we compare this score with the other counties in this study, Pottawattamie County exhibits a fairly high level of administrative coordination.

Evaluation of the Pottawattamie County System

Today many believe that family and child services should be accessible, available, high in quality, well coordinated, integrated, and standardized in terms of eligibility requirements and operating procedures. They should also have the capacity to continue to improve. In addition, children and adolescents with mental health problems should be identified early, and services should be family-centered and community-based, should be individualized and provide for the least restrictive treatment, and should encourage family participation and the child's smooth transition to adulthood.

We asked both administrators and staff how they would measure their system against these standards. We asked respondents the degree to which these characteristics exist today and the degree to which they existed three years ago, and then we calculated the difference. The range of differences was then broken down into descriptive categories.

Staff Responses. Staff responses are shown in Table 7.8 The most frequent responses were Little Improvement (45%) and Some Improvement (36%).

Administrative Responses. The results from administrative respondents are shown in Table 7.9 The most frequently given response of administrators was Some Improvement (43%), followed by Little Improvement (31%).

Table 7.8 Perceptions of Staff Members in Pottawattamie County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=110)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	4 %	40 %	46 %	9 %
Available	1	10	36	46	6
High in Quality	0	10	40	43	7
Well Coordinated	1	15	46	27	10
Integrated	0	1	48	42	8
Standardized	0	4	63	27	6
Capable of Further Improvement	2	18	48	13	16
In regard to the following core values and principles:					
Early Identification	0	3	47	34	14
Family-Centered	0	6	33	44	16
Community-Based	2	8	43	39	8
Individualized Service	3	5	37	34	21
Least Restrictive	2	5	37	32	23
Family Participation	2	5	48	35	10
Smooth Transition to Adulthood	0	3	57	35	5
Average Percent of Responses in Each Category	1 %	7 %	45 %	36 %	12 %

Note: Percentages may not sum to 100, due to rounding.

Table 7.9 Perceptions of Administrators in Pottawattamie County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=12)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	8 %	25 %	50 %	17 %
Available	0	8	50	33	8
High in Quality	0	8	58	25	8
Well Coordinated	0	0	33	27	8
Integrated	8	0	33	58	0
Standardized	0	0	50	41	8
Capable of Further Improvement	0	0	50	42	8
In regard to the following core values and principles:					
Early Identification	0	0	17	50	25
Family-Centered	0	0	33	50	17
Community-Based	0	0	58	33	8
Individualized Service	0	8	17	75	0
Least Restrictive	8	0	17	67	8
Family Participation	0	8	25	50	17
Smooth Transition to Adulthood	0	8	42	50	0
Average Percent of Responses in Each Category	1 %	3 %	31 %	43 %	8 %

Note: Percentages may not sum to 100, due to rounding.

VIII. Case Study of SED Service System in Wapello County

Wapello County
SED Service System

Wapello County is a rural county located in the southeastern quadrant of the state. Its population in the 1990 census was 35,687, a loss of over 10% from 1980. The county seat is Ottumwa, a typical rural small city that has suffered economically as a result of the farm crisis of the mid 1980s and the recession of the 1990s.

Strengths of the Wapello County System

In the last decade, Wapello County has experienced a growth in demand for mental health services. Mental health professionals attribute this growth to the fact that these services are much more acceptable to people since our society is experiencing a change in values and perceptions about mental health services.

The mental health agencies in Wapello County have a long history of interagency collaboration. Several years ago a community task force was organized to address the mental health needs of seriously emotionally disturbed children. This comprehensive evaluation team was made up of agencies that cooperate to provide mental health services to SED children. The task force met on a once-a-month basis in an attempt to pool resources and improve services that are available to SED children in Wapello County.

During the years 1984-87 the community task force members had access to an interagency computer system sponsored by the Ottumwa Regional Health Center that stored client information. This system has ceased operations because problems of client confidentiality could not be solved. As an alternative, the agencies are currently working on development of a common intake form that will meet the needs of all agencies concerned.

Identified Problems in the Wapello County System

Generally, the mental health agencies in Wapello County are willing to work together. The main problem they face is the lack of funding for services most needed by the SED population. Only five of the ten core mental health services are available in Wapello County, and the five that are available have very limited capacity. The Wapello administrators reported many gaps in the service delivery system for children, the most serious of which are:

- The inability to retain a child psychiatrist. In the past Wapello County has had a child psychiatrist, but at present the nearest doctor is in Iowa City, which is two hours by car. The Ottumwa Regional Health Center is currently attempting to recruit a child psychiatrist . If successful, this will allow the Center to provide inpatient psychiatric services for children and adolescents. It must be noted, though, that this will not solve the entire problem.

- The lack of inpatient hospital psychiatric services. Many children needing these services have historically had to go to hospitals in cities such as Kirksville, in Missouri, and Iowa City, Cedar Rapids, and Des Moines in Iowa. Out-of-county placement causes many problems for families and children, and makes reentry into schools difficult.

• The lack of a day treatment, residential treatment, and emergency shelters. There is currently no day time treatment program for children other than what is found in the self-contained special education classrooms.

In general, administrators said that very few improvements can be made in mental health services in Wapello County until state and local governments allocate more funding for mental health services. Several suggested that mental health services be moved out of the Department of Human Services into a separate department, thus giving mental health programs and policy more visibility and stature. The second step would be to separate Mental Illness from Mental Retardation and Developmental Disabilities, as they are now grouped within DHS. If these categories were separated, the public would see how underfunded mental health services are in Iowa. Perhaps, then, funding would be allocated specifically for the mental health needs of children and adolescents.

How can the system be improved? Mental health professionals in Wapello County would like to get away from the saying that there is nothing below I-80. One suggestion was the idea that satellite psychiatric centers from the University of Iowa should be placed in several areas of southern Iowa to help curtail the number of SED children being sent out of county and out of state for mental health services.

Characteristics of the Wapello County System

The interagency service system for SED children in Wapello County is described below in some detail and is summarized by the profile shown in Table 8.1.

On the basis of 1980 Census data, it is estimated that there are 1,413 children in Wapello County from birth to age 19 who need some type of mental health services, while 707 can be classified as seriously emotionally disturbed, with serious and/or chronic mental health problems.

Table 8.1 Profile of the Wapello County Service Delivery System

Total Number of Children[1]		11,978
Ages 0 to 10	5,688	
11 to 19	6,290	
Children Needing Mental Health Services[2]		1,413
Seriously Emotionally Disturbed (SED) Children[2]		707
Children Placed Outside County Who Should Be Served In County[3]		22
Number of Agencies		13
Number of SED Programs[4]		26
Average Size of Caseload Per Program		
Monthly Minimum		2
Monthly Maximum		106
Monthly Average		25
Average Number of Referrals Per Agency		
Monthly Minimum		2
Monthly Maximum		51
Monthly Average		13

[1] Source: 1980 U.S. Population Census.

[2] One accepted estimate of the need for mental health services among children is approximately 11.8% of the total child population; about half of the total children needing mental health services are estimated to be seriously emotionally disturbed (SED) (Gilmore, Chang, & Coron, 1984).

[3] Point-in-Time DHS/JCS Study (5-18-90).

[4] A program is a discrete service offered by the staff of an organization.

Comprehensiveness and Accessibility of Services. Thirteen organizations that provide direct mental health services to Wapello County children and youth are included in this study.

1. Department of Human Services (DHS)
2. Southern Prairie Area Education Agency (AEA)
3. Southern Iowa Mental Health Center (MHC)
4. Juvenile Court Services (JCS)
5. Ottumwa Regional Health Center (ORHC)
6. Family Crisis Center (FCC)
7. Siddartha Group Home for Boys (Sid)
8. American Home Finding (AHF)
9. Southern Economic Development Association (SEDA)
10. Regional Specialty Clinics (RSC)
11. First Resources (FR)
12. Iowa Children & Family Services (ICFS)
13. Tanager Place (TAN)

This list includes the central organizations which provide core services to SED children, but it is not an exhaustive list of organizations in the Ottumwa area which provide services to SED clients in Wapello County. The necessity to limit our investigation should not be construed as a reflection on the role of other providers of services in the system. The services provided by the 13 agencies, with the average monthly caseload for each service, are listed in Table 8.2.

Table 8.2 Core and Support Mental Health Services in Wapello County

CASSP Core Mental Health Services	Provider Agency	Monthly Average Caseload
Education and Prevention		
Nonresidential Treatment		
• Diagnostic Services	Southern Iowa Mental Health Center	35
	Ottumwa Regional Health Center	6
• Outpatient Treatment	Southern Iowa Mental Health Center	95
	Regional Specialty Clinics	6
• Day Treatment	NA	
• Crisis Intervention	Iowa Children and Family Services	3
	Ottumwa Regional Health Center	6
• Home-Based Treatment	Department of Human Services	10
Residential		
• Therapeutic Group Homes	American Home Finding	10
• Therapeutic Foster Care	NA	
• Residential Treatment	Tanager	2
• Inpatient Hospitalization	NA	
• **Case Management**	NA	
SUB TOTAL		173

Essential Support Services	Provider Agency	Monthly Average Caseload
Social Services		
Child Protection Assessment	Department of Human Services	DNA
Counseling	Department of Human Services (family preservation)	50
	Department of Human Services (family centered)	85
	Department of Human Services (youth services)	25
	Siddartha Group Home for Boys	21
	First Resources (counseling & sexual abuse)	40
	Juvenile Court Services (probation & counseling)	4
	Iowa Children and Family Services (in-home)	4
Regular Foster Care	Tanager	2
	Department of Human Services	106
Regular Group Homes/Shelter	Siddartha Group Home for Boys	21
	Family Crisis Center (shelter & counseling)	2
	American HomeFinding (shelter)	12
Educational Services		
Assessment	Southern Prairie AEA	DNA
Counseling	Southern Prairie AEA	DNA
Self-Contained		
Behavior Disorder Classes	Southern Prairie AEA	37
Chemical Dependency Treatment		
Outpatient	Southern Iowa Economic Development Association	2
Inpatient	NA	
Other Services		
Teenage Parenting	NA	
Youth Employment	NA	
	GRAND TOTAL	584

• Core Services NA = Not Available DNA = Data Not Available

The 13 organizations provide a total of 26 direct service programs to residents of Wapello County. Of all the programs surveyed, the smallest average caseload was two open cases per month, while the largest was 106.

The total monthly caseload for the programs which provided data was 584. When compared with the estimated SED population (see Table 8.1, Seriously Emotionally Disturbed [SED] Children), the caseload represents 83% of those in need of service. [Because the total caseload of 584 is most probably a duplicated count, and since we know that SED children are often multi-problem and thus receive two or more services, 83% is probably an inflated estimate. On the other hand, because data were not available from agencies which serve large numbers of clients (e.g., DHS and AEA), the caseload of 584 is undoubtedly an undercount.]

Structure of the System. Data on intra-system referrals were obtained from all 13 agencies in the study. These 13 agencies reported making a total of 175 referrals within the system each month. [It must be noted that these referrals are also to some extent duplicative, in that an individual client may be referred more than once each month. We do not know from this data how many individual children, on the average, received a service referral.] Table 8.3 shows the volume of referrals which each of the 13 organizations in the system reported making to the other 12 organizations.

Table 8.3 Wapello County Client Referral Matrix (average number of referrals per month)

	Receivers —>													
Senders ↓	1	2	3	4	5	6	7	8	9	10	11	12	13	Total
1. DHS	—	6	9	1	5	1	3	12	3	3	5	3	.25	51.25
2. AEA	3	—	1						.5		1			5.5
3. MHC			—		3	1.5			.25	3	.5			8.25
4. JCS	4	4	2	—				1	1	.5	.5	1		14
5. ORHC	5	.5	3		—			3	5	2				18.5
6. FCC	.5	2	2			—		.25	.5	.5				5.75
7. Sid			.5				—		2					2.5
8. AHF		5	5		3			—	2	4	2			21
9. SEDA	.25		.25		2				—	2	.25			4.75
10. RSC	8		0.5		5	.5			3	—				17
11. FR			2			0.25			.5	2	—			4.75
12. ICFS	3	3	6		2	2			4			—		20
13. TAN					1					1			—	2
Total	23.75	20.5	31.25	1	21	5.25	3	16.25	21.75	18	9.25	4	0.25	175.25

In a system of organizations that is serving the same client population, it is often necessary, because clients have multiple problems, to refer clients to other organizations for services. There are, then, potentially two linkages between each pair of agencies: one going one direction and one going the other direction. Each cell in the matrix represents a "channel" by which a client is referred from one organization to another. In Wapello County, with 13 organizations in the service system, it is possible to have 156 client referral channels. The data indicate that there are 71 one-way referral channels in use, and therefore that 46% of the potential channels are being used.

Combining this information concerning the number of agencies, their services, and their referral patterns produces Figure 8.1, which shows the structure of the Wapello County system in graphic form. This diagraph is a model of the real world, simplified to make it easily understood, but representative of the structure of the Wapello County delivery system.

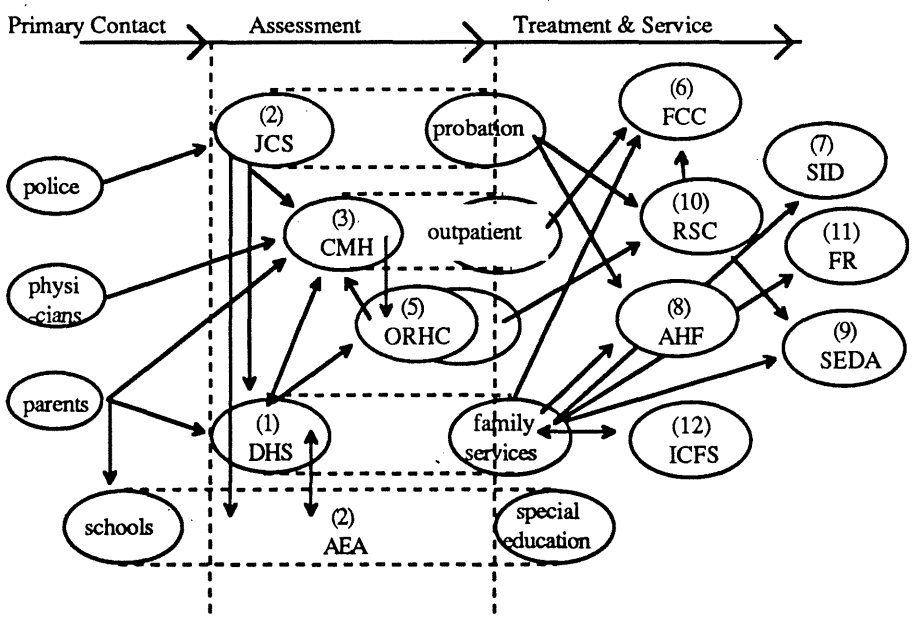
On the basis of the Referral Matrix and the Diagraph, it is difficult to isolate discrete clusters in the Wapello System. The linkages between the organizations are quite similar; more than half the agencies have fairly equal rates of referral. DHS makes the majority of referrals, but six or seven organizations appears to be quite central in terms of receiving referrals: DHS, AEA, JCS, ORHC, SEDA, and RSC.

Centrality is an important structural dimension of interagency systems, because it is related to the ease with which people can communicate with each other and coordinate their work. The

more a system has a dominant central core agency, the more likely it is that the system will run smoothly.

This system is relatively decentralized, as indicated by the description above and a centrality index of .23. The Department of Human Services is most central to the system, but there are no other dominant agencies in the system.

Figure 8.1 Wapello County SED Service Delivery System



Orientation to Clients

In addition to the size and structure of an interagency system, the orientation of workers to their clients has an important influence on the way that the system functions. Below, we look at the Scope of Assessment and the Scope of Service, which serve as measures of the breadth of assessment and of service delivery.

Scope of Assessment. As knowledge has grown, our perceptions of human behavior have become more complex. The increase in knowledge has also meant that many more clients are diagnosed as having multiple problems and needing multiple services. This phenomenon is also producing more variation in the way that different human services assess children and prepare service plans. Some professionals use many categories when doing an assessment, while others take a narrow view of their clients' problems.

In this study we were interested in determining how broadly workers in Iowa's SED service systems viewed their clients. We therefore listed the four major categories of internal biological functioning (communication, intelligence, emotions, and physiology) and two categories of external functioning (social and the concrete environment). We asked the workers in Wapello County to estimate the percentage of their SED clients that exhibited problems in each of these six categories. The results are shown in Table 8.4.

Scope of Service. Another way to describe a system's orientation to clients is to ask: how comprehensive is the service plan for each client; to what degree are clients receiving multiple services? A comprehensive mental health system for children and adolescents contains many services deemed essential. The framework used for this study contains seven categories of services (mental health, social, educational, health, vocational, recreational, and operational). Within each category there are multiple services, for a total of 31 services.

Staff members were asked for their perceptions regarding the percentage of the SED clients that received each of these 31 services. The results are shown in Table 8.5, which shows that the service utilized by SED children most frequently was assessment & planning, with 88% of the children receiving this service, followed by case management (76%), financial assistance (65%), resource rooms (62%), self-contained special education (61%), home-based services (58%), and protective services (50%). These services were thought to be utilized by at least one-half of the SED children.

As a means of summarizing these data, we computed a Scope of Service Index. The questionnaire of a worker who viewed every single one of his/her clients as receiving all 31 services would indicate that the system has the broadest posssible orientation, and it would be assigned a score of 1.0; the questionnaire of a worker who viewed his/her clients as receiving only one service would be assigned a score of .03. In Wapello County, the average Scope of Service score was .27, and the standard deviation was .13 (meaning that 66% of the scores ranged from .14 to .40). In general terms, the value of this Index indicates that SED children in Wapello County are viewed by the staff members as having narrow service plans.

Case Coordination and Administrative Coordination

One of the most important aspects of interagency service delivery systems, one that attracts the most attention, is coordination. Although this term is used with great frequency, there is not always agreemeent about its meaning. As used in this study, interagency coordination refers to methods that internally regulate a system. When interorganizational coordination exists, many aspects of the work activity are so governed that the effort of each individual organization is directed toward common objectives and goals. When coordination does not exist, organizations have few restrictions and are free to choose their own objectives and methods, which may be consistent with or conflict with those of other organizations.

Table 8.5 Perceptions of Staff Members in Wapello County Concerning the Percent of their SED Clients that Receive Each of 31 Services (N=39)

		Mean	S.D.
Mental Health Services	Outpatient Treatment	.44	.36
	Home-Based Services	.58	.45
	Day Treatment	.13	.23
	Therapeutic Foster Care	.12	.19
	Therapeutic Group Care	.14	.24
	Inpatient Hospitalization	.09	.15
Social Services	Protective Services	.50	.38
	Financial Assistance	.65	.28
	Respite Care	.08	.15
	Shelter Services	.16	.17
	Foster Care	.26	.22
	Adoption	.07	.16
Educational Services	Assessment & Planning	.88	.57
	Resource Rooms	.62	.50
	Self-Contained Special Ed.	.61	.59
	Home-Bound Instruction	.05	.10
	Residential Schools	.10	.17
	Alternative Programs	.11	.22
Health Services	Screening & Assessment	.47	.36
	Primary Care	.22	.34
	Acute Care	.11	.27
	Long-Term Care	.03	.09
Vocational Services	Vocational Assessment	.15	.20
	Vocational Skills Training	.16	.24
	Work Experiences	.10	.16
	Shelter Employment	.04	.06
Recreational Services	After School Programs	.05	.08
	Summer Camps	.09	.15
Operational Services	Case Management	.76	.69
	Transportation	.18	.25
	Advocacy	.39	.71
Scope of Service Index [a]		.27	.13

[a] The Scope of Service Index is a summative score that represents the degree to which clients receive multiple services. It can range from 0 to 1.0 and it represents the respondent's perception of service implementation. It is computed for each respondent by adding the scores assigned to each of the 31 service categories and dividing by 31. The overall index is the average of the respondents' scores.

Case Coordination. Staff must often work closely with staff in other agencies. The need for case coordination is profoundly affected by the way that clients flow through a system. There are three basic client flow patterns. In the Sequential Method, organizations make referrals to and accept referrals from other agencies in the system (clients flow from one organization to another but are served by only one at a time). In the Reciprocal Method, organizations make and accept referrals from more than one organization in the system (clients are served simultaneously by more than one agency). In the Team Method, organizations share the work of serving or treating clients (clients are served by agencies whose treatment staff have developed together one treatment plan and who constitute one intervention team).

If the pattern is sequential—as in a system where adolescents are referred from home to hospital, to group facility, and home again—there is little necessity for case coordination across organizational boundaries, because patients are treated by one organization at a time. At the other extreme is the team pattern, as in a system that serves multi-problem families, where there is a compelling necessity for case coordination because the child has to be treated simultaneously by workers from numerous agencies.

We asked staff members in Wapello County what percentage of their SED clients progressed through their system in each of these three patterns. Their responses are shown in Table 8.6, which shows that in Wapello County the three methods of case coordination are all used about equally often, with the team pattern being used slightly more often.

Table 8.6 Perceptions of Staff Members in Wapello County Regarding Percentage of their SED Clients that Flow Through the Wapello County Service Delivery System in a Sequential, Reciprocal, or Team Pattern (N=63).

Case Coordination Pattern	Mean	SD
Sequential	.56	.71
Reciprocal	.82	.61
Team	.25	.26
Total Case Coordination Score[a]	1.98	.70

[a] Total Case Coordination Score is a summative weighted score that represents the total case coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by weighting the percentage assigned to each type of case coordination method (Sequential* 1) + (Reciprocal * 1.5) + (Team * 3.0) and then summing the products. The overall score is the average of the respondents' weighted scores.

As a way of summarizing these data, we computed a Total Case Coordination Score. Based on the theory described above—that simultaneous services from multiple organizations require high levels of case coordination—we weighted the scores for each type of coordination method so that team methods received the most weight, followed by reciprocal methods and then sequential methods. This means of assessing the amount of case coordination within the Wapello system produced a score of 1.98, with a standard deviation of .70. As we see when we compare this score with the other counties in this study, Wapello County exhibited the highest level of case coordination.

Administrative Coordination. Staff members are not the only persons in service delivery who are asked to mesh their work with persons in other agencies. Administrators will coordinate their services with others if they perceive a need for compatibility between programs. For example, if my agency provides service X, and if, in order for my service to be effective, my client must also be receiving service Y (which is provided by another agency), then I will work to insure that my client can get service Y and that it is compatible (offered when, where, and how my client needs it). This means that as an administrator I will monitor various incompatibilities that occur when programs reside in different organizations with different perspectives about how clients should be treated. I will seek to feed back into the system information about incompatibilities when they occur, and I will do this by sharing information and making decisions with administrators of other agencies in the system. As interagency systems move toward an increasing emphasis on effective services to multi-problem clients, the greater is the need for information feedback via group planning and decision making structures as opposed to impersonal rules and plans.

Methods of administrative coordination can be regarded, therefore, as varying with respect to the amount of information feedback required to implement them. Three methods, which utilize increasing amounts of feedback, were used as indicators of the amount of coordination. Administrative coordination by Impersonal Programming includes the utlilization of plans, rules, regulations, agreements, contracts, or anything which removes discretion from individual workers and requires little information feedback. Administrative coordination by Personal Feedback includes the use of person-to-person contact between administrators, or the designation of an individual to act as coordinator in order to expedite planning and decision-making across organizational boundaries. Administrative coordination by Group Methods means feedback which is obtained through face-to-face communication by two or more individuals who plan and make decision by consensus.

Going from impersonal, to personal, to group methods means that we are achieving higher levels of coordination. In fact, the weights we assign to the coordination scores are based on the assumption that group methods achieve three times more coordination than do impersonal methods.

Table 8.7 shows how the administrators of SED programs in Wapello County perceive the use of impersonal, personal, and group methods of coordination among the agencies in their system. Personal methods are thought to be the dominant method (49%) by which administrators coordinate their programs in Wapello County. Impersonal methods (39%) are used quite frequently, and group methods (12%) are used much less often.

As a way of summarizing these data, we computed a Total Administrative Coordination Score. Based on the theory described above—that increasing amounts of feedback produce increasing amounts of coordination—we weighted the scores for each type of coordination method so that group methods received the most weight, followed by personal methods and then

impersonal methods. This means of assessing the amount of coordination within the Wapello County system produced a score of 1.48, with a standard deviation of .18. As we see when we compare this score with the other counties in this study, Wapello County exhibits a fairly low level of administrative coordination.

Table 8.7 Perceptions of Administrators in Wapello County Regarding Percent of Time Impersonal, Personal, or Group Methods of Coordination are Used (N=6)

Methods of Administrative Coordination	Mean	SD
Impersonal Methods (legally binding laws, rules; written interagency agreements; unwritten interagency agreements)	.39	.27
Personal Methods (administrators or staff acting as coordinator; informal communication)	.49	.28
Group Methods (standing committees; ad hoc committees)	.12	.08
Total Administrative Coordination Score [a]	1.48	.18

[a] Total Administrative Coordination Score is a summative weighted score that represents total administrative coordination effort. It can range from 1.0 to 3.0. It is computed for each respondent by weighting the percentage assigned to each type of administrative coordination method (Impersonal * 1) + (Personal * 1.5) + (Group * 3.0) and then summing the products . The overall score is the average of the respondents' weighted scores.

Evaluation of the Wapello County System

Today many believe that family and child services should be accessible, available, high in quality, well coordinated, integrated, and standardized in terms of eligibility requirements and operating procedures. They should also have the capacity to continue to improve. In addition, children and adolescents with mental health problems should be identified early, and services should be family-centered and community-based, should be individualized and provide for the least restrictive treatment, and should encourage family participation and the child's smooth transition to adulthood.

We asked both administrators and staff how they would measure their system against these standards. We asked respondents the degree to which these characteristics exist today and the degree to which they existed three years ago, and then we calculated the difference. The range of differences was then broken down into descriptive categories.

Staff Responses. Staff responses are shown in Table 8.8 The most frequent responses were Little Improvement (56%) and Some Improvement (29%).

Administrative Responses. The results from administrative respondents are shown in Table 8.9 The most frequently given response of administrators was Little Improvement (57%), followed by Some Improvement (37%).

Table 8.8 Perceptions of Staff Members in Wapello County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=39)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	3 %	52 %	32 %	10 %
Available	0	6	45	32	16
High in Quality	0	6	48	29	16
Well Coordinated	0	3	58	29	6
Integrated	0	13	61	19	6
Standardized	0	0	77	16	6
Capable of Further Improvement	0	6	71	13	6
In regard to the following core values and principles:					
Early Identification	0	10	42	39	10
Family-Centered	0	13	48	26	13
Community-Based	0	10	48	39	3
Individualized Service	0	0	52	39	10
Least Restrictive	0	3	55	35	6
Family Participation	0	3	61	26	10
Smooth Transition to Adulthood	0	6	61	26	6
Average Percent of Responses in Each Category	0 %	6 %	56 %	29 %	9 %

Note: Percentages may not sum to 100, due to rounding.

Table 8.9 Perceptions of Administrators in Wapello County Regarding Extent of Improvement in SED Service Delivery System During Past Three Years (N=10)

	Extent of Change During Past Three Years				
	Percent of Respondents in Each Category				
	Worse Off	No Change	Little Improvement	Some Improvement	Much Improvement
Services to SED Children and Families are:					
Accessible	0 %	0 %	40 %	60 %	0 %
Available	0	0	50	50	0
High in Quality	11	0	44	44	0
Well Coordinated	0	0	50	50	0
Integrated	0	0	60	40	0
Standardized	0	0	70	30	0
Capable of Further Improvement	0	10	50	40	0
In regard to the following core values and principles:					
Early Identification	0	0	44	44	11
Family-Centered	0	0	56	44	0
Community-Based	0	0	56	33	11
Individualized Service	0	0	78	11	11
Least Restrictive	0	0	78	11	11
Family Participation	0	0	33	67	0
Smooth Transition to Adulthood	0	0	89	0	11
Average Percent of Responses in Each Category	1 %	1 %	57 %	37 %	4 %

Note: Percentages may not sum to 100, due to rounding.

Conclusions

The information contained in this case study is typical of rural counties in the state. It illustrates the results of the federal and state abandonment of mental health services funding, and the inability of rural counties to fill the gap.

Wapello County is resource poor. There are four core service gaps in the county: day treatment, therapeutic foster care, inpatient treatment, and case management. In addition, residential treatment is virtually unavailable. In the service vacuum that exists in this county, there are a large number of counseling programs, which accounts for the very high percentage of SED children in care index. This percentage is misleading if read out of context. Like Delaware County, seriously emotionally disturbed Wapello children must go out of county for treatment, which accounts for the high number of out-of-county placements.

The most interesting observation, and one we made over and over again in the course of this study, is that in resource poor counties the level of coordination among both administrators and staff is higher than in urban counties where there is a comprehensive array of services. This is because rural staff know they have to cooperate and develop working linkages in order to make up for lack of available services.

There is little that will inprove the care of SED children in this county without the infusion of funds. This is a case where targeting money at a problem is necessary, but probably not sufficient, to solve the problem.

Appendix A.

Methodology

Methodology of the Study

The research design for this study of child mental health systems in Iowa utilized a single system case study approach and was accomplished in six steps:

1 Eight counties were selected as study sites.

2. The core child mental health agencies belonging to the service delivery systems in the eight counties were identified.

3. Concepts were defined.

4. Data collection instruments were designed.

5. Qualitative and quantitative data were collected in interviews and on questionnaires from a total of 68 administrators and 340 staff personnel in the selected organizations.

6. The data were analyzed on a case-by-case basis using network analytic techniques, and descriptive profiles and summary conclusions for each of the counties were developed. The data were aggregated in order to make summary assessment of the county systems.

These six steps are described in greater detail below.

1. Selection of Study Locations

Funds available for the evaluative research were not sufficient to assess the impact of the CASSP program in all counties that had received grants during the initial three year period. We decided,therefore, to collect data from four counties that had grants and four comparable counties that had not had grants. Because of a number of constraints, data that were sufficient to complete the case studies were collected in only six counties. These counties were Cass, Delaware, Linn, Polk, Pottawattamie, and Wapello.

2. Identification of the SED Service Delivery System in the Six Study Counties

Community inter-agency service delivery systems are organic, ever-changing organizational networks that can be difficult to "bound," especially in densely populated urban areas. Identifying all of the organizations that participate in an inter-agency network, an abstraction difficult to measure, is not a straightforward task. There are several factors that account for this difficulty. There may not be a widespread consensus about the definition of the target population. If this is the case, then it is difficult to decide what services constitute the network and, therefore, what agencies should be included or excluded. In research of this type, choices must be made based on a priori criteria that select agencies for inclusion within the service system.

In this study of community-based CASSP systems in Iowa, the criteria used to select agencies were as follows. Organizations had to:

(1) be formally organized;
(2) be a provider of a direct human service for SED children and/or adolescents; and
(3) make referrals to and/or accept clients from other organizations.

Using these criteria for inclusion, the service systems in the original eight counties were identified in a two step process.

(1) The first step in the data collection process was to identify the organizations that directly or indirectly serve the SED population in each of the eight study counties. Several documents were used for this purpose, such as phone directories and state DHS plans. In addition, county CASSP committee members were asked to identify the organizations that they believed were central to providing services to SED children and adolescents.

(2) Administrators in each organization identified as a participating agency were interviewed. Among other things they were asked to name all of the agencies that their organization interacts with while serving SED children and adolescents. When these administrators named organizations not already identified as participating agencies, those organizations were added to the list of participating members of the inter-agency system in that county. These criteria and procedures for "bounding" the systems resulted in a total of 71 organizations in the six counties described in this report. These organizations are listed in the case studies, and a complete list of the 71 is found in Appendix B.

3. Concepts Defined

Many concepts were defined in the course of constructing the interview schedule and questionnaires used in this study. Four of the most important of these are listed below.

(1) Severely emotionally disturbed (SED) children and adolescents are those who:

- are under 18 years of age or within the age range 18 through 21 when deemed clinically or developmentally eligible for children or youth services;
- exhibit behavioral, emotional, or social disabilities that disrupt their family or interpersonal relationships; and
- have disabilities or dysfunctions that have either continued for an extended period of time, or on the basis of specific assessment by a qualified professional are judged likely to continue for an extended period of time.

The definition of SED used in the study did not include the at risk population (although the SED label usually includes this population) because the study was intended to focus on the most central organizations and core services. Limited time and financial resources precluded the inclusion of all preventive and developmental services and programs that are necessary for at risk populations.

(2) A SED Service Delivery System is a group of organizations located in a defined geographic area that works together in order to jointly provide a comprehensive range of psychosocial and support services by means of coordinated planning and integrated treatment. The measure of the linkages that bind these organizations to the system was the volume of clients referred between them. Organizations that were linked to the system with fewer than 12 client referrals per year (or six per year in the case of Delaware County) were excluded from the system.

(3) Core Services in a SED service delivery system are ten discrete residential and nonresidential treatment services.

Nonresidential:	Diagnostic Services
	Outpatient Treatment
	Day Treatment
	Crisis Intervention
	Home-Based Services
Residential:	Therapeutic Group Homes
	Therapeutic Foster Care
	Residential Treatment
	Inpatient Hospitalization
Operation:	Case Management

Actual services available in any county will vary according to availability of resources in specific counties and as a result of historical events and leadership. Nevertheless, this study is based on the presumption that there is a core of ten mental health services that should be available at the local level for all SED children and adolescents (Isaacs, 1984).

(4) Community is defined in this study as a county. This definition is an artifact of the fact that the CASSP grants included in this study were made to county CASSP Committees.

4. Data Collection Instruments Designed

A schedule to collect qualitative data was used for the initial interview with administrators. In addition, two questionnaires were constructed: one for administrators and one for staff.

Interview Schedule (for Administrators). The schedule covered four topic areas: history of mental health services for children in the county, history of the CASSP grant, respondent's knowledge of the current SED service delivery system, and respondent's perceptions regarding its strengths and weaknesses.

Questionnaire #1 (for Administrators). This survey instrument was constructed to solicit information from the executive directors or program directors in large multi-program organizations. The questionnaire contained 28 items that fall into four areas:

4 items	general information about the participating agency
2 items	information about the agency's services provided to the SED clients
8 items	description of coordination methods used and nature of linkages with other agencies in the service delivery system
14 items	respondent's assessment of the effectiveness of the system and changes it had undergone during the prior three years

Questionnaire #2 (for Staff). This survey instrument was constructed to solicit information from direct service staff of the participating agencies. The questionnaire contained 18 items that fell into four areas:

1 item	respondent's perception of the degree to which SED children are multi-problem
1 item	respondent's perception of the extent to which SED children receive multiple services
2 item	case integration methods used in the inter-agency system

14 items respondent's assessment of the effectiveness of the system and changes it had undergone during the prior three years

(5) Data Collection

Once the core organizations in the county's service system were identified, the researchers contacted the administrators, explained the study, and asked for an appointment in order to conduct the initial interview. During this interview, the Principal Investigator collected the qualitative data on audio tape and administered Questionnaire #1. At the conclusion of the interviews, administrators were asked if the Research Assistants could return to the organization at the time of a staff meeting and administer Questionnaire #2 to all staff that participate in delivery of services to SED children. In most cases the Assistants did administer the form directly; where this was not possible they instructed someone within the agency in how to administer the questionnaire. Stamped addressed envelopes were provided to those staff who did not complete the form in the presence of University personnel. In total, responses from 61 administrators and 340 staff persons are included in this report.

(6) Data Analysis

The first part of each case study contains summaries of the qualitative data. These summaries were based on the transcripts of the audio tapes and on notes taken during face-to-face and telephone interviews with collateral persons in the target communities.

The quantitative data were analyzed using several different methods of network analysis:

1. In service delivery systems, the flow of clients into and through the system is of primary interest because by analyzing these flows much can be deduced about the amount and kinds of coordination that are needed to assure quality of service. In this study, a symmetrical matrix of referrals and the list of participating agencies was used to construct a diagraph—a chart that depicts how clients flow through the system (Van de Ven & Ferry, 1980).

2. Organizations with similar patterns of relations were clustered to determine groups that relate similarly to each other (Tichy & Fombrun, 1979; Burt & Minor, 1982). These methods are useful for describing the structure of a service delivery system. Called block modeling, this technique arranges organizations into what are called "structurally equivalent groups." These clusters define the position of each organization in the network and the overall pattern of role relations in the system in terms of the character of relations between pairs of organizations.

3. A number of indications of the structural characteristics of networks were computed based on analysis of the pairwise interactions among organizations in the network. These measures include size, density of interactions, and dominance of the system by a single or a few agencies.

Appendix B.

Organizations Included in Study, by County

Organizations Included in Study, by County

Cass County (6 organizations)

Southwest Iowa Mental Health Center
Cass County Memorial Hospital
Iowa Department of Human Services
Loess Hills Area Education Agency 13
Lutheran Social Service
Alcohol and Drug Assistance Agency

Delaware County (8 organizations)

Iowa Department of Human Services
Northeast Mental Health Center (Dubuque)
Juvenile Court Services
Memorial Hospital
Cromwell Children's Unit (Independence)
Area Education Agency
Psychological Associates (Independence)
Substance Abuse Center

Linn County (16 organizations)

Department of Human Services
Juvenile Court Services
Grant Wood Area Education Agency
Abbe Center Mental Health Center
St. Luke's Hospital Adolescent Services
Mercy Child Guidance Center
Tanager Place
Families, Inc.
Family Service Agency
Foundation II
Lutheran Social Service
Alternative Services to Youth and Families
Four Oaks
Area Substance Abuse Council
Child Protection Center, St. Luke's
Sedlacek Treatment Center, Mercy Hospital

Polk County (17 organizations)

Polk County Department of Human Services
Des Moines Public Schools
Spectrum/Methodist Hospital
Orchard Place
Youth Emergency Service & Shelter
Broadlawns Medical Center
Polk County Juvenile Court
Des Moines Child & Adolescent Center
Polk County Youth Services & Shelter
Youth Law Center
Iowa Lutheran Hospital
Iowa Lutheran Social Service
Our Primary Purpose
Iowa Children & Family Services
Mercy Psychological Services
Charter Hospital
YSS - Homeless Youth

Pottawattamie County (11 organizations)

Department of Human Services
Juvenile Court Services
Loess Hills Area Education Agency
Mercy Mental Health Center
Mercy Hospital, McDermott
Mercy Chemical Dependency Services
Jennie Edmundson Memorial Hospital
Family Service Addiction Services
Children's Square USA
Family Group
Family Networks, Inc.

Wapello County (13 organizations)

Department of Human Services
Southern Prairie Area Education Agency
Southern Iowa Mental Health Center
Juvenile Court Services
Ottumwa Regional Health Center
Family Crisis Center
Siddartha Group Home for Boys
American Home Finding
Southern Economic Development Association
Regional Specialty Clinics
First Resources
Iowa Children & Family Services
Tanager Place

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